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Original Articles.

BEDFORD SPRINGS.

THE magnesian spring was discovered in 1804, by a mechanic who was fishing for trout. He was a sufferer from "rheumatism," and also from chronic ulcers of the legs. Coming accidentally upon the spring he drank freely, found himself benefited, and after a few weeks' use of the water was entirely cured. This directed attention to the waters, and in a short time the spring was visited by throngs of invalids, who came in their carriages and camped in the valley where they could obtain the water.

Bedford soon became very popular, and for many years disputed the palm with Sarotaga and White Sulphur as the fashionable resort of the country. But the New York spa was managed with New York enterprise, and developed into what it now is, with its horse races, boating, gambling resorts, etc., while the proprietors of Bedford, old-fashioned people, too wealthy to be ambitious, let things drift along in the old-fashioned way. And so the Pennsylvania springs gradually fell out of the race, and Bedford grew to be little more than a memory of the past.

"Bedford? Where is Bedford? Oh, yes! My grandfather used to go there every year. Bedford was a great place before the war, but we haven't heard any mention of it for years. Is it still open?"

That is about the position the most celebrated resort in Pennsylvania has occupied for many years.

And yet it was once a busy place, and many an illustrious name was inscribed on its registers in the old days, before the war. Pennsylvania's only President, James Buchanan, established here the "summer capital," presided over by Harriet Lane. Thaddeus Stevens, that Titan whose terrible energy was nurtured by the same soil as his peaceful contemporary, made Bedford his resting place during the summer's heat. Joe Johnston, and many other notables, considered the pilgrimage to Bedford a necessary part of the annual programme.

A few years ago, Bedford awoke from her torpor. The owners were induced to dispose of the property to a company of capitalists, who were determined to develop it into a resort in keeping with modern ideas. No new Saratoga was attempted, but rather a development on the old lines, as a quiet, elegant resort for people of refinement. The old, antiquated buildings were pulled down and new ones erected, with all the modern improvements, such as elevators, baths, gas, and electric lights. The grounds were beautified, means of amusement provided excellent music, miles of gravel walks and roads graded, with well-appointed stables, while the service and table were greatly improved. The patrons of Bedford in the days when the chickens roosted in the rafters and new-laid eggs were occasionally found in the beds, would scarcely recognize the place at present with all the appointments of a first-class summer hotel.

The location of Bedford is well-fitted for a summer resort. In the heart of the Alleghenies, 1,080 feet above the sea, it supplies all the advantages of a hill country. The nights are always cool; there are no mosquitoes, and sleep is always to be obtained. This is often of the first importance to those who come for rest and quiet. For a week or two, to persons coming from the lower levels, there is an irresistible inclination to sleep, and this is one of the best evidences that the climate agrees with the visitor. After this passes off, the hills and mountain streams invite the ready feet of the visitor to explore their mysteries. Many a delightful ramble may be taken over the surrounding country, with the botanist's herbarium or the geologist's hammer, whipping the streams for trout, Lake Caledonia for salmon trout, and the "blue Juniata"

for black bass, or witnessing the sunrise from the summit of the hills. Within easy reach of the springs are to be found the pretty town of Bedford, with 3,000 inhabitants; Island Park, a resort for pic-nicking, and Juniata Crossings, for fishing parties; while the White Sulphur Springs are ten miles from Bedford, Johnstown is sixteen, and Cresson near enough to visit and return the same day.

But the great attractions at Bedford are the famous springs. It is rare, indeed, to find in a single confined locality five sources of such markedly different characters. The best known of these is the Magnesia Spring. The water issues from an opening in the rock, and is discharged at the rate of a barrel a minute the year round. The water is gently laxative from the magnesia present, and any debilitating effect is obviated by the iron. Many mineral waters contain iron with laxative salts, but it is doubtful if any possess these ingredients as nicely balanced as they are in this. Either the iron is in excess, and constipation results, or the salts are too abundant and debility ensues. The Bedford magnesia water is admirably suited for the great class of anemics, with a tendency to constipation. The latest analysis is by Henry Leffmann, whose report is as follows:

	Grains to U. S. G.
Calcium carbonate	7.55
Ferrous carbonate (iron carbonate)	0.06
Calcium sulphate	103.61
Magnesium sulphate	41.34
Potassium sulphate	0.09
Sodium sulphate	0.34
Sodium chloride	0.45
Silica	0.42
Calcium phosphate	0.01
Lithium	traces
Strontium	traces
Nitrates	none
Nitrites	none
Fixed organic matter	none
Total solids	153.87

NOTE.—The water of the Magnesia Spring is noticeable from its large proportion of active mineral ingredients, especially the magnesium sulphate (Epsom salts), which confers upon it a mild aperient quality. The high degree of organic purity is also to be noted. The absence of organic matter, nitrates and nitrites, together with the very low figure for sodium chloride, indicate that this water arises from sources deep in the earth, and free from any of the polluting influences to which surface waters and superficial springs are liable. As drawn from the spring the water is perfectly clear, and retains its qualities unchanged for a long period, the active ingredients being held in solution by their own properties, and not by any accidental association.

HENRY LEFFMANN, M.D.

The second spring has been enthusiastically termed "The Pure Spring." It is one of the finest table waters in the world, having few rivals in any country.

ANALYSIS OF THE PURE SPRING.

	Grain to U. S. G.
Calcium carbonate	0.335
Magnesium carbonate	0.132
Iron carbonate	0.056
Calcium sulphate	0.204
Sodium chloride	0.047
Silica	0.465
Nitrates	None
Nitrites	None
Total solids	1.240

HENRY LEFFMANN, M.D.

The Sulphur Spring rises on the west side of Shover's Creek, about two hundred yards distant from the Magnesia Spring. It is a less copious spring than the others, and the water exhales a very strong odor of sulphuretted hydrogen. It holds in solution carbonic acid, sulphuretted hydrogen, small quantities of lime, magnesia, and common salt, and it contains scarcely any iron. The water is very valuable in the treatment of blood diseases, chronic inflammations, rheumatic affections, etc.

ANALYSIS OF SULPHUR SPRING.

Temperature of water.....62.6° F.
" " air.....67.1° F.

One gallon of 231 cubic inches contains:

Carbonate of	calcium	10.21359 grains.
" "	magnesium	0.99376 "
" "	iron	0.08189 "
" "	manganese	trace "
Sulphate "	calcium	73.08438 "
" "	magnesium	33.39402 "
" "	sodium	0.51219 "
" "	potassium	0.40578 "
Phosphate "	calcium	0.02177 "
Chloride "	lithium	faint trace
" "	sodium	0.36710 "
Sulphide "	hydrogen	0.08520 "
Silicic acid		0.53749 "
Carbonic acid (free)		2.79479 "
		122.492 5

F. A. GENTH.

The Chalybeate Spring is three-quarters of a mile southwest of the hotel.

Temperature of water.....52.7° F.
" " air.....68° F.

One gallon of 231 cubic inches contains:

Carbonate of	calcium	8.85143 grains.
" "	magnesium	1.20143 "
" "	iron	0.44233 "
" "	manganese	trace "
" "	sodium	0.39499 "
" "	potassium	0.13191 "
Sulphate "	calcium	2.74122 "
Phosphate "	"	0.03336 "
Chloride "	sodium	0.12025 "
Sulphide "	hydrogen	0.00298 "
Silicic acid		0.79297 "
Carbonic acid (free)		5.59575 "
		20.30862

F. A. GENTH.

This is best suited to anemic cases, where a tendency to constipation does not exist, and where a large dose of iron is required. It must not be forgotten that the iron in a natural mineral water is very active, and accomplishes much more than the iron of the pharmacist.

The intelligent use of any really active waters demands the advice of a physician. It would be as rational to send a patient to a drug store with directions to help himself, as to send him to Saratoga or Bedford without any guidance.

In general, Bedford is suited to anemics, rheumatic and catarrhal cases, to those who suffer with digestive and hepatic affections, insomnia, and neurasthenia; to those who require rest, rather than excitement; mountain air, rather than sea-shore.

FOR the stings of venomous reptiles, such as scorpions, Banerjee (*Ind. Med. Gaz.*) recommends the local use of a mixture of one part chloral, with two parts camphor. The skin is punctured with a needle near the site of the sting, and the liquid applied with a feather. The symptoms soon disappear.

THE PENNSYLVANIA CATSKILLS.

By FRANK WOODBURY, M.D.

THE name, Catskill mountains, is applied generally to that range of the Appalachian system, which is found in Eastern New York, and which, in the main, runs parallel to the Hudson river through a great portion of its course. Nevertheless, what is known among geologists as the Catskill group of the Devonian rocks, among which red sandstone and shale are prominent, is better represented by some mountains of the same range in Eastern and Central Pennsylvania. No better illustration, indeed, is to be found of the formation which is known by the title of "Catskill" than the mountains of Luzerne county, near Wilkesbarre, and notably the Nescopec mountain. These rocks are of old formation, directly underlying the coal measures and mountain limestone.

As compared with the mountains of New York State, it is observed that those of this region of Pennsylvania, comprising the eastern water-shed, are, as a rule, less abrupt and present an undulating outline of table-lands, rather than a succession of high peaks, although there are a number of isolated mountains which, as a rule, are of less elevation than those lying farther north, belonging to the same system.

Nestled among these elevated regions are a number of well-known and justly-prized summer resorts. The elevation of about 2,000 feet is not sufficient to cause any very noticeable increase of respiration, the slight rarefaction of the air being made up in point of quality by its purity, and the presence of oxygen in a very active form known as ozone. The advantages of the mountain resorts are too well known to require enumeration. The pure air, uncontaminated water, absence of hot nights, and freedom from flies, mosquitoes and malaria are prominent among them.

The Glen Summit Hotel is situated at the head of the Nescopee valley, at an elevation of nearly 2,000 feet above the level of the sea. The main line of the "picturesque Lehigh Valley Railroad" runs past its door, and a few miles north disappears through Solomon's Gap, and commences its descent into the beautiful Wyoming valley. In going down the mountain, the passengers may enjoy a beautiful panorama of the scenery of this historic ground, with the north branch of the Susquehanna river winding its way through the plain, where the spires and towers of Wilkesbarre can be seen; while the great coal-breakers of Plymouth and Nanticoke present tangible proofs of the principal industry of the famous valley. Glen Summit is less than 150 miles from New York City, and about 125 miles from Philadelphia, or about five hours and four hours schedule time, without change of cars. The train service is excellent, as it is on the main line to the west, via Buffalo and Niagara Falls.

The hotel, being only seven years old, is of recent construction, and has all the modern improvements, hydraulic elevator, electric lights and bells throughout, open grate fires, and is furnished in first-class style, while the table is unsurpassed, being supplied with the best that the markets afford by the experienced and popular manager, Mr. Charles Wenrick, who has had charge for several years, and who has been very successful. Last year it was found necessary to add a new wing containing fifty bedrooms, single and *en suite*, and new reading, writing, card and smoking rooms have been furnished; and we should not overlook the ten-pin alley and billiard-rooms. There is also a drug-store and a telegraph office on the premises. A Philadelphia physician resides at the hotel during the season.

Surrounding the house are mountains of undulating outline, among which wind roads of unusual excellence, being made with red shale rolled hard, giving a surface like a well-kept gravel road in a city park. Walking, bicycle-riding, horseback exercise, or driving, are popular, while for those who enjoy fishing and boating, excellent opportunities are offered. There is a large artificial lake within a mile of the hotel, where pleasure boats are at the service of the guests, the water being delightfully clear and pure. The mountains abound in springs: a famous one near the hotel, is known as the Great Indian Sand Spring, its overflow forms the lake just referred to. Its water is perfectly soft, and flows at the rate of over 100,000 gallons daily. As this water is supplied to the hotel, we may note that an analysis recently made by Dr. Henry Leffman, Analyst to the State Board of Health of Pennsylvania, gives it the highest character, containing less than two grains to the gallon of salts, "free from organic pollution and perfectly limpid." He pronounces it "eminently suitable for all purposes."

With regard to the temperature, it may be said that the temperature ranges about 20° lower than that of the coast. The average height of the thermometer at three o'clock, during the summer, is only 76°; and at night it is 64°, or less, making blankets the rule throughout the season, and the wood fires in the morning most cheerful and pleasant companions, even in July and August. The Glen Summit Hotel is beautifully located, and in its immediate neighborhood are several cottages in villa style, whose occupants add brilliance and sociability to the frequent entertainments at the hotel. Among the amusements are tally-ho and buckboard drives to Bear Creek, Laurel Run, Prospect Point, Arbutus Peak, Haystack Mountain, and other points of interest in the vicinity. Excursions are also made to Harvey's Lake, to Glen Onoko, and Mauch Chunk and the Switch-Back; while those wishing to understand the mysteries of coal mining can be fully satisfied by visiting the mines around Plymouth. It is by no means a slight advantage that the well-appointed stores of Wilkesbarre are within easy reaching distance, where the ladies may do their shopping in the morning and return to the hotel for dinner.

The atmosphere of Glen Summit is usually dry, and there is a greater proportion of clear days than is usually found at mountain resorts nearer the coast, because the mountains to the east about the Delaware Water Gap and Mt. Pocono, and the line of hills, lying to the south, empty the clouds of their contents before they get so far.

The society to be met at this resort is refined, and many prominent families of Wilkesbarre, Easton, Philadelphia, and New York, make Glen Summit their home during the greater part of the summer, especially after a short visit to the seashore. The bracing and invigorating character of the air, and freedom from impurities of all kinds, make this a favorite locality for sufferers from hay-fever, chronic malaria, and debility. It is especially restorative to the brain-worker and victim of insomnia.

NEVERSINK MOUNTAIN HOTEL.

THIS comfortable and commodious hotel is situated near Reading, Pa., on a mountain from which it takes its name. Being only fifty eight miles from Philadelphia, it is easily accessible either by the Philadelphia and Reading Railroad or by the Penn-

sylvania. Its altitude is one thousand feet above sea level, assuring cool nights, and surrounded by most beautiful valleys, making it one of the most desirable of the summer resorts within easy reach of Philadelphia and New York.

The hotel is 360 feet in length, 40 feet in width, and 5 stories (including basement) in height, with elegant old-fashioned fire-places in the parlors, assembly hall, reception-rooms, and in the large dining-rooms the sunlight. Ventilating and sanitary arrangements and baths are the latest and best. Fire-proof elevators to all the floors, electric lighting throughout the building. The furnishing throughout is in keeping with the superior construction exhibited everywhere. The cuisine will be an especial feature. The rich agricultural country surrounding affords an abundance of fresh milk, eggs and vegetables, and the famous Berkshire butter is made in this county.

This hotel is not only an acceptable resort for invalids, but for persons requiring rest and recreation, on account of the abundance of fresh air and good mountain water. Near by are the celebrated chalybeate springs.

The grounds comprise ten acres, laid out by a practical landscape gardener, and will be for the exclusive use of the guests. The close proximity of the Schuylkill river gives plenty of steamboating, rowing and fishing. A piazza, fourteen feet wide, surrounds the entire building, making over 800 feet of a promenade. Bayard Taylor, who frequently visited this section, said on one occasion, "The valley of the Klapperthal is one of the prettiest in the world." This was more recently confirmed by Erastus Wiman, who, upon visiting this spot last summer and first beheld the beautiful panorama spread out at his feet, exclaimed, "I have never beheld so magnificent a view in my life, and I have seen many of this world's attractions." At the southern slope of the Neversink mountain, the Schuylkill winds its way through a most beautiful valley which is dotted with cozy homes of the thrifty burghers of the county of Berks. This river, viewed from the top of the hotel or broad verandas, looks like a silver ribbon encircling the base of the mountain and fading away in the dim distance, seemingly to run into the eastern horizon, just above Pottstown, thirty miles away. Delightful views can be had from all sides of the building, extending into seven counties. Among the many attractions, to which good footpaths, roads and electric railways lead, are the grand Pavilion, Klapperthal Park, Penn Mountain, the Observatory and the Big Dam.

This resort is popular on account of being only one and one-half hours from Philadelphia, and three and one-half hours from New York; approachable also from the West, North and South. The best medical skill in the interior of the State is to be found in Reading—a fact attested to by the selection of Dr. Saml. L. Kurtz to the presidency of the State Medical Society of Pennsylvania for 1892.

THE LITHIA SPRING AT ELKTON, VIRGINIA.

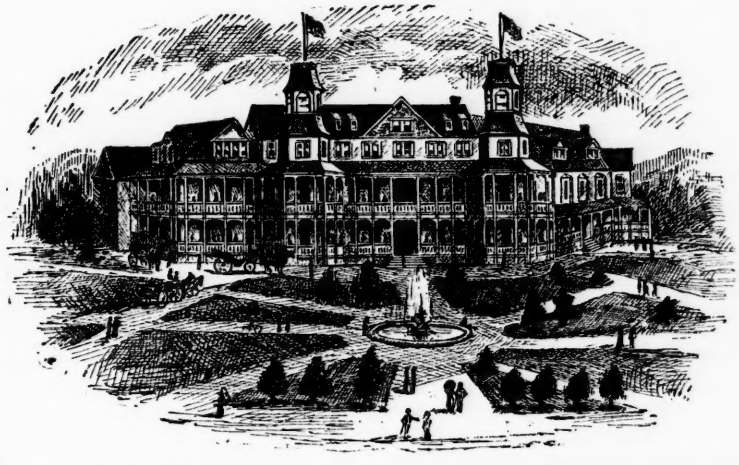
THE medical profession has broadened and become perceptibly more observant in its estimate of the value of natural mineral waters in the treatment of disease. The time is at hand when they will be regarded as among the trustiest agents in the treatment of certain affections. It is acknowledged that there is virtue in the natural waters far in excess of that of their ingredients when artificially compounded. These reflections have been suggested by a recent visit to Elk Lithia Springs in Rockingham county, Virginia. This fountain of crystal purity, with ever bubbling gas and bold current, rises on a little hillock near the foot of the western slope of the Blue Ridge Mountains, from a bed of sand, and pours into a basin about twenty-five feet long and twenty feet wide, and discharges over a million gallons of water every day.

Pausing at the spring, with your face to the West, a beautiful vision greets you—a quiet, old pastoral village strung along the Elk stream and road; a slight, steady grade downward to the Shenandoah Railroad, which extends along the border of a great carpet of verdure, stretching across the valley to the Massanutten range. Beyond, you behold a plain of rare fertility and beauty girded by the river, and dotted by the newly-founded village of Elkton. Off there to the left of our point of vision, about one mile, stands the new Elkton hotel, a handsome structure from this distance resembling a great bouquet, having for its stem a natural eminence or knoll, which slopes gracefully in every direction, and from which an extensive view of a varied and charming landscape is revealed. The spot where we are standing is seventy-five feet above the level of the first floor of the hotel, and the Elk Lithia Spring has linked its fortunes with those of this inviting retreat for the sick, through a main pipe which bears its current by gravitation to every floor of the hotel, thus supplying its inmates with the water in abundance for bathing and drinking.

Be it remembered we are here in the heart of the far-famed and picturesque Shenandoah Valley, 1,000 feet above sea level, overlooking that beautiful stream, the Shenandoah river, which flows almost at your feet, and offers a stretch of still, clear water, three hundred feet wide and over one mile long, for pleasure boats, or for the shell of the racer. You are looking upon a landscape lovelier than the most beautiful canton of Switzerland. The Blue Mountain range lifts its summit in full view only a few miles away, from whose granite springs the great fountain. On the opposite side, six miles away, the Massanutten Mountain spreads its broad, tent-like sides sharply against the horizon, with a wide stretch of intervening fertile farms, dense woods and flowing river. Truly, the hardy followers of Spottswood, who decided to risk their scalps in the effort to reclaim this lovely valley from the Indian, were not far wrong. It was worth the risk. The broad bed of alluvium, stretching from range to range, smiling with the plenty of its inexhaustible fertility, must have seemed a "garden of the Lord" to these men fresh from the sterile plains of the Eastern slope. The country was parcelled out among the first explorers, whose descendants still occupy it. All this section was secured by one of Spottswood's followers, whose descendants, the Millers, Bells, and Hansbergers, still own over a thousand acres of the choicest land in the valley. From its first settlement there was a steady infiltration of Pennsylvanians, sturdy Scotch-Irish Presbyterians and Dunkards, who pressed into the valley from the North, so that this section is peopled by a race differing in names and in origin from that occupying the Eastern slopes of the Alleghenies. This movement reached even into North Carolina, where the mountaineers' names recall those most common in Western Pennsylvania; and in Lynchburg are to be found some offshoots from the pioneer families of the Cumberland Valley. The predilection of these men was for the food staples, and this valley became the granary of Virginia, while the

soil to the eastward was being exhausted by tobacco growing. To-day, looking out on the rich farms, sheltered by the long mountain ranges, watered by the beautiful river, one is strongly tempted to follow the example of the men who first gazed upon this scene, and made it their home.

Walking along these great covered porches, or gazing out of the sunlit windows, you are entranced by the new beauties opened by every successive point of view, and invigorated in every nerve and muscle and joint by the bracing air of this elevated region. A nimble step for a morning walk will bring you to the noted Swift Run Gap in the Blue Ridge, or in the opposite direction to the top of Massanutten. The bold cliffs and dark recesses of the mountain tempt the visitor to explore their mysteries. A determined pedestrian will be well repaid by witnessing the sunrise from the southern peak of Massanutten; and for those who love to ride, the excellent horses of the valley render every spot on either range accessible, or take you along the pike seventeen miles to Harrisonburg, tapping the B. & O. R. R. There you can slip down the valley to New Market, Mt. Jackson, Strasburg, Front Royal, Kurnstown, Winchester, and all the other historic places of this great valley. The S. V. R. R. will take you to the Luray Caverns, twenty-four miles distant to the North, or South seventeen miles to Weyer's Grottoes and Port Republic; Basic City, on the C. & O., thirty-three miles; the magic city, Buena Vista, seventy-two miles; or by the evening's train to Natural Bridge, eighty-six miles, and returning to Elkton by eleven next day. You can take a sleeper in the evening at Philadelphia, and breakfast at Elkton next morning; you can take a train at the Elkton station at 5 P. M., and dine next noon at Boston. Shenandoah to the North, Roanoke, Lynchburg, Radford, Salem, the Pocahontas coal section, and many other centers of the awakening energies of Virginia are within easy reach; while across the hills to the East lies the venerable University of Virginia at Charlottesville.



And now what more of this great spring? For the main object of this article is to bring that to the notice of the medical profession. As I stood at the margin of this fine source, I thought how strange it was that no one had ever planned the establishment of a sanitarium here. What has Carlsbad or Kissingen or Saratoga, more or better for the diseased than this spring and valley? Rasselas did not discover a happier valley, nor did the Naiads ever endow any waters with more wonderful curative powers. The Elk Lithia is not a panacea, but it will cure and has cured nephritic colic and the uric acid diathesis. The record of the cures of chronic eruptions, old sores, and of old men affected with retention of urine, made by this water for many consecutive years, under the intelligent direction of Dr. I. H. Wolf, is substantial and convincing proof.

The spring is not a new discovery, but has been used for years by sufferers, from far and near, to obtain relief from chronic dyspepsia, heart-burn, acid stomach, flatulency, and kidney and bladder troubles, gout, rheumatism, and gravel or stone in the bladder. Its effects upon stone in the bladder are particularly wonderful. The case of a distinguished Presbyterian clergyman, of Virginia, who found relief and cure there last summer, will attract and interest all surgeons who have had such cases under their treatment, and have had to resort to lithotomy for the relief of their patients. He had been a sufferer for years; his attacks of nephritic colic became more frequent and severe, until finally each return was prolonged for days, prostrating his physical forces and seriously impairing his health. In this condition he went to the Elk Lithia Spring, and commenced the free use of its water. At the end of twenty-four hours he was startled by a new symptom—a painful and burning sensation in the urethra, as of the passage of some rough particle, which returned with every effort to urinate. Within two weeks he heard a rattling sound on the sides of the urinal, accompanying the flow of the urine, and upon examination found a rough particle of disintegrated stone, slug shaped, and about as large as the end of his little finger if compressed into a round shape. To his delight the bladder had been emptied of gravel, and he commenced at once to build up and improve in health, finally becoming hearty and able to prosecute the work of a laborious pastorate with buoyancy. Every one who knows him regards his cure as almost miraculous.

If a company could be organized by prominent physicians to establish a first-class sanitarium at Elkton, it would yield a handsome profit to the proprietors, and supply a most valuable auxiliary in the treatment of many affections. The enterprise would require but little outlay at first, the hotel being new, carefully built, and of almost perfect architectural proportions, with 7,000 feet of covered porch floors and promenades. The equipment of the building is modern and complete, having been furnished throughout by Wanamaker, last summer, and in all its appointments, as to light, heat, bathing, and all other respects, is attractive and comfortable.

The building is of wood, with brick foundations, finished throughout in yellow or pitch pine, beautifully matched. It contains seventy-five bed-rooms for guests, and many are so large that the building can accommodate two hundred guests. There is not a room in it that cannot be flooded with sunlight at some time in the day; not a window that does not command a view of the mountains. The house is wired for electric lights, and is also fitted with electric annunciators. It has steam heat throughout, and many rooms are also furnished with open grates, for wood or coal. Wood costs but sixty-five cents a

ton here, and the cheeriness of a blazing fire of hickory logs can be appreciated by the city-worn invalid. The hotel is but a few steps from the railroad, which skirts the front of the hotel property. Three-quarters of a mile of the river bank belongs to the hotel, with sloping, wooded banks, offering a delightful place to swing in the hammock, stroll or fish. The cooking appliances are amply sufficient for five times as many guests as the house will accommodate. A large ice-house stands in the rear, and is furnished with artificial ice from Lynchburg or Knickerbocker from Philadelphia, at a very low rate. The water for every purpose comes from the Lithia spring, and is supplied in abundance. The table is easily and cheaply supplied from the rich farms adjoining and from the city markets. Coal is brought from Pennsylvania, and delivered at the same price as in this city. The location is admirable, in that it is well suited for a house to be kept open all the year round, being neither too hot in summer nor too cold in winter. It is in the direct line of travel from the South, and invalids can get in a parlor car at Jacksonville, Thomasville or Aiken, and get out at Elkton, or *vice versa*, to avoid the danger of too sudden a transition from one extreme to the other. Plenty of sport is to be had at the proper season. The Shenandoah is well supplied with black bass and yellow sunfish, while the mountain streams form a trouting field as yet but little known. Wild turkeys are quite plentiful, as well as quail, pheasants, woodcock, squirrels and foxes. Deer are to be found over the mountains, in West Virginia.

There is also on the hotel grounds a chalybeate spring, whose waters have discolored the ground around with deposits of iron; but it has never been analyzed, and its properties are undetermined. It might prove a valuable adjunct to the lithia water, for patients who are anæmic.

The hotel is drained into the river at the lower margin of the grounds. There is a good fall, and the drainage system is perfect.

The packing and shipping of the water could be developed easily into a lucrative department of this establishment, with the prestige of prominent physicians as patrons and founders. The water could be charged with gas at the packing-house, making it a competitor with Apollinaris and other sparkling waters.

The climatic conditions would seem to be most favorable. High winds are prevented by the mountains, but there is always a breeze sweeping up the valley. The temperature during the hottest part of summer is never oppressive, malaria is unknown, and the nights are always cool enough to make a blanket a safe and desirable covering. No mosquitoes were ever seen in the valley. In a conversation with a resident doctor, who is over sixty years of age, he told me that the per cent. of aged persons in the community is large; that he had known of but one death from consumption in thirty years, and that there is no tendency among the people to pulmonary diseases. Tuberculosis is unknown, except when imported into the district.

The autumn months, when the leaves take on their coloring, are glorious; the atmosphere is salubrious and exhilarating; the mountain sides are one continuous canvas, touched with Nature's brush; a refreshing feast for the soul, and a constant impulse to exclamations of surprise and admiration, and even shouts of praise.

I conclude this hurried contribution to your valuable journal by giving the analysis of the Elk Lithia Water for the benefit of your professional readers. It was made with great care by Mr. M. B. Hardin, the eminent analytical chemist and professor at the Virginia Military Institute.

CHEMICAL PHENOMENA AND RESULTS OF ANALYSIS MADE BY PROFESSOR HARDIN, OF LEXINGTON, VA.

LEXINGTON, VA., August 6, 1890.

Dear Sir—I have completed the analysis of the water collected July 7th from the "Elk Lithia" Spring, at Elkton, Va. The surrounding country is beautiful, the spring exceptionally bold and attractive. The rocks exposed in the vicinity are the Potsdam slates. The water of the spring rises from a bed of sand into a basin walled with quartzite. This reservoir, which is about twenty-five feet long and twenty-feet wide, is filled to the depth of about two feet, the surplus water running off through an overflow pipe at this level. The sandy bottom becomes coated with a transparent gelatinous deposit, in which the microscope exhibits an abundance of diatomaceæ. The water is clear and colorless, and is without smell or any distinct taste. Gas bubbles rise freely from the bottom of the spring at diffierent points, and quite copiously when the bottom is stirred.

At the time of my visit, July 7th, the thermometer immersed in the spring, which is not covered, showed a temperature of 57.02 F., at half-past four P. M., the temperature of the air at that time being 89.06 F.

Blue litmus paper immersed in the water became faint pink, the blue color being restored on drying. Red litmus paper was not affected in the water, but upon drying became faint blue. The water exhibited a very faint iron reaction; afforded at once a slight turbidity with silver nitrate in presence of nitric acid; yielded after standing a short time, a turbidity with barium chloride in presence of hydro-chloric acid, and gave an immediate precipitate with barium chloride and ammonia.

The iron was determined on the spot with permanganate, and the gases were collected for analysis.

I witnessed the collection and bottling of the water, which I brought to this laboratory on the following day.

The direct result of the analysis may be arranged as follows:

GRAINS OF ANHYDROUS CONSTITUENTS PER U. S. GALLON OF 231 CUBIC INCHES.

Sodium carbonate	0.14580
Potassium "	0.15450
Lithium "	0.04665
Calcium "	3.60400
Magnesium "	2.56600
Iron (ferrous) "	0.12250
Manganese "	0.01750
Cobalt "	trace.
Copper "	trace.
Potassium sulphate	0.19245
Sodium chloride	0.07580
Sodium bromide	0.00399
Sodium iodide	0.00043
Aluminum phosphate	0.02799
Sodium borate	trace.
Ammonium nitrate	trace.
Calcium fluoride	trace.
Arsenic trioxide	0.00090
Titanium dioxide	0.00216
Silica	0.85730
Organic matter	trace.
Total (carbonates normal)	7.81797
Carbon dioxide combined with carbonates in bi-carbonates	3.12039
	10.93836

DISSOLVED GASES.

Cubic Inches per Gallon at 60° F. and Pressure of 30 Inches.

Carbon dioxide (free)	20.01
Nitrogen	4.21
Oxygen	1.92
	26.14

Composition of the Gases Rising in Bubbles of 100 Volumes.

Nitrogen	82.00
Oxygen	14.40
Carbon dioxide	3.60
Marsh gas	trace.
	100.00

The water contains but traces of organic matter, and in this respect is very pure. The following determinations by Wanklyn's process will be of interest:

Parts per Million.

Actual ammonia	.007
"Albumenoid" ammonia	.010

In accordance with your request, I give you the total solids and the carbonate of lithia in this water, based upon the imperial gallon of 277.276 cubic inches. The proportions of the other constituents you can readily determine yourself.

Per Imperial Gallon.

Total solids	9.384 grains.
Lithium carbonate	0.056 "

Very respectfully,

M. B. HARDIN.

To summarize the advantages offered by Elkton as a site for a sanitarium:

1. Climate: cool in summer; mild in winter; no violent storms.

2. Access: very easy; parlor car from New York or Philadelphia in the evening lands the visitor at Elkton the next morning. Two trains daily each way.

3. Scenery: beautiful and varied; mountain, river and valley.

4. Supplies: easily obtained and cheap; as to food, fuel and ice.

5. Amusements: riding, driving; excursions up and down the railroad; boating; fishing for bass and trout; shooting, in the season, of all small game, and turkeys, and fox-hunting.

6. The value of a total change, into a new climate, with new surroundings, and among a people differing markedly from our own Northern people, is not to be overlooked in dealing with nervous cases.

7. The special advantages afforded by the use of Lithia Water, for bathing and internally and, perhaps, that of the Chalybeate Water, if it prove to be of value.

8. A building perfectly new, which requires no alteration or expenditure of any sort, to fit it for the purposes of a sanatorium, except that required to furnish Turkish baths and electrical treatment, if required.

CATARRH OF THE BILE DUCTS.[1]

By F. W. POWERS,
REINBECK, IOWA.

IN the consideration of this subject I wish to invoke your attention to a pathological condition, which I fear is often overlooked in the hasty examination of patients in our every-day practice.

The authoritative writers who contributed to our medical literature, previous to the latter half of the nineteenth century, have naught to say concerning this disorder, which the writer would consider of great importance. We attach such an importance to it, not from studying the mortality tables, since few deaths could be traced to this disease alone; but from the dangerous sequelæ which may follow, from the few weeks or months of suffering to the individual who should be so unfortunate as to be a subject of an attack, and from the embarrassment to which the physician is sometimes placed in regard to prognosis on account of being in error or uncertain in his diagnosis, and accordingly his line of treatment being similarly at fault. While we are not unaware that it is an easy task to differentiate the many diseases to which the gall manufactory is liable, yet ye cannot sanction that habit of some medical practitioners of heaping upon this important organ, in ambiguous terms, all those obscure ailments to which the human flesh is heir. But we do believe that by probing for the proper history, giving the case a careful, earnest, thoughtful consideration, this coupled with the requisite examination, and perhaps a little watching, a correct diagnosis should be early reached.

It is to Virchow that we should give homage for being the first to bring catarrh of the bile ducts in a systematic way before the minds of the medical fraternity, and this is certainly of not the least importance of his medical literary contributions.

Among the exciting causes of this derangement of the bile ducts might be mentioned all those conditions which will give rise to a catarrhal condition in any other part of the human anatomy; such as climatic changes, which in one individual would produce catarrh of the bronchi, in another, with bilious type, would produce catarrh of the bile ducts. While we cannot strictly say that catarrh of the biliary passages is hereditary; yet certain individuals are predisposed to an attack, and Bartholow aptly says: "That a tendency to hepatic disorders is a feature in certain types of constitution, and as such types are transmitted, the hepatic disorder seems to be inherited." Numerous other causes might be mentioned, such as an acrid condition of the bile, previously existing concretions in gall-bladder, malarial miasm and exhalations from cess pools and sewers, a passive congestion of the portal system as a sequel of an obstructive lession at the cardiac orifice, pulmonary disease, or vaso-motor parasis. And lastly, but the most influential cause, and the one which gives to 80 per cent. of all cases, we would mention catarrh by contiguity of tissue. Gastro-duodenal catarrh being the initial condition, and from thence the catarrhal inflammation extends to the bile ducts; so that all those conditions which will give rise to a gastro-duodenal catarrh, such as an over indulgence in certain condiments, malt liquors, spirits, starchy, saccharine and fatty foods may result in icterus catarrhalis, and finally biliary calculi.

At the present time, to my knowledge, none except Harley doubt the importance of catarrh of the biliary passages as a factor in the production of jaundice. Since jaundice, to a greater or less degree, is quite a prominent symptom of this disease, we shall give it a passing notice. Considering it only as it is developed from this catarrhal condition.

Those who have reached the pinnacle of fame in the medical literature of to-day, affirm that jaundice is produced from the absorption of bile after its formation in the liver. Anything which will retard its passage through the ducts will develop icterus; such as a congested and œdematous condition of the mucous membrane lining the bile ducts or duodenum, and more particulary the pars intestinalis, or a collection of the catarrhal secretions. Such a collection may form a plug of mucus sufficiently large to entirely prevent the passage of the bile into the intestines. Heidenhain has demonstrated that the bile passes in the direction of least resistance, and from such an obstruction of mucus the ducts will become over-distended, and from this pressure the bile will be driven against the interlobular vessels with greater force than the blood pressure in said vessels, so that we will have a rapid absorption of bile, not only from the interlobular vessels, but also from the lymphatics and blood-vessels of the ducts, and accordingly we will have a well developed case of jaundice. This obstruction of mucus may be the nucleus for the formation of biliary calculi, develop inspissation of

[1] Read before the forty-first annual session of the Iowa State Medical Society, which met at Des Moines, Iowa, May 18 to 20, 1892.

bile, or be passed into the intestines and give rise to no further inconvenience. It is not my purpose to bring this symptom (jaundice) too prominently before your minds, since we do have well developed cases of biliary catarrh which do not develop jaundice. In such cases, however, the capillary bile ducts and ductus choledochus are but little effected. The inflammatory action being limited to either the ductus cysticus or gall bladder. Should the inflammatory action have been quite active we may have a true blenorrhœa, a suppuration of the ducts, small hepatic abscesses, develop croup, or cause an agglutination of the walls, and a narrowing of the caliber of the ducts, or it may be a complete obliteration of the same. However, 90 per cent. of our cases will terminate in complete resolution.

Wishing to make this paper as practical as possible, and believing that this can be best accomplished by a concise delineation of noted cases, we will now direct your attention for the further consideration of diagnosis, prognosis, and treatment to a few observations from the experience of the writer, illustrative of the different forms of the disease.

OBSERVATION I.—Was called March 13, 1889, to visit Mr. A. T. U.; aged twenty-four; a printer by trade, but at this time was deputy postmaster. He had dark complexion; bilious temperament; full habit; total abstainer; weight two hundred pounds. During the two years previous to the above date, at intervals of a few months, he had attacks of indigestion, attended with some uneasiness in the epigastrium. These attacks were usually relieved by a cathartic, followed by careful dieting, and some digestive assistant like lactopeptine. He had taken treatment for lead colic, believing that to be the cause of his periods of indisposition. We found him suffering from a continuous dull pain just above and a little to the right of the umbilicus; pain increased by pressure; pulse 85; temperature 99°; and at times headache. A yellowish white coating on the tongue; a bitter, sticky taste; vomiting water and mucus at irregular intervals; skin a little muddy and sclerotic coat slightly tinged; anorexia; bowels constipated; urine yellowish-brown color; liver normal in size; and gall-bladder not recognizable upon palpation or percussion. Had been complaining for the previous four weeks of pain in the epigastrium shortly after eating potatoes, bread, oatmeal or other starchy food. He could partake freely of fruits with no inconvenience therefrom. Had taken his accustomed cathartic and digestive assistant with no apparent improvement.

A diagnosis of catarrh of the biliary passages as a sequel of gastro-duodenal catarrh was ventured. Patient was told that it would be from a few days to three weeks and possibly three months before he would be entirely relieved. Gave him phosphate soda ½ drachm every three hours; calomel 1 grain every three hours, and wrote the following prescription:

℞.—Tr. aconite (German)..... ♏. viii.
Spts. nitrous ether..... oz. ½.
El. pepsin and bismuth.....q.s. ad oz. ii.
M.—Sig. Teaspoonful every three hours.

Administering the doses one hour apart. He also took lactopeptine, grs. 10, after eating.

Visited him next day, March 14, and found during the night he had two thin clay-colored stools. Urine being still high colored, discontinued the calomel and gave teaspoonful doses of el. diuretic with potass. acetate instead.

Patient was cautioned to abstain from starchy foods and partake only of milk and animal broths. The same treatment with slight variations and the addition of quinine sulph. was continued for the four succeeding days, when he had so far improved that further visits were discontinued. He was up and around and paid his mother a visit during the afternoon of March 20, about one-half block distant, and upon returning home partook of some boiled fat pork, which at once renewed the pain. Had I been called at this time I should have given an emetic. There are but few conditions wherein an emetic would be justifiable in the treatment of catarrh of the bile ducts.

During the night patient vomited; had a severe rigor, followed with heat and later profuse perspiration. The following morning his complexion was again slightly jaundiced. Similar rigors returned usually at 7 A.M. and 5 P.M. for the fifteen succeeding days; large doses of sulph. quinine, aromatic sulphuric acid, Fowler's solution, arsenious acid, nitro-muriatic acid, tr. nux vom., phosphate soda, nitrate potassa, and, at times, small and repeated doses of calomel, all having been given some time during the two weeks, to the contrary notwithstanding.

For a few days quinine sulph. would be given in large doses a few hours before the expectancy of the rigor, and again it would be given in fair, often-repeated doses, both of which seemed of no avail. April 4, patient had last well-marked chill. At this time he was taking in twenty-four hours, quinine sulph. grs. 84; nitro-muriatic acid (c.p.) m. 40; Fowler's solution m. 25; tr. nux vom. m. 20, and phosphate soda q. s. to move bowels.

Patient had little creepers down his back (as he expressed it) at the expectancy of rigor each day for the next ten days, when his temperature registered 102°. This fell ½° each day until normal was reached.

During the period of convalesence patient took a capsule three times a day, which contained:

℞.—Ferri redacti ..... gr. ii.
Acidi arseniosi..... gr. $\frac{1}{20}$.
Quinini sulph..... gr. ii.
Ol. pip. nigr..... gtt. ½.

He finally made a good recovery and returned to his work May 15, and has suffered no inconvenience since from his sickness.

We have introduced this as a typical case of catarrh of the bile ducts, with strong presumptive evidence of remittant complication. However, would it not be quite plausible that the rigors were the result of the absorption of the metamorphoses of the biliary acids and mucus? The metamorphoses attacking nervous ganglion and making itself manifest in the form of a rigor. This we believe to be a question of serious import, and should receive the careful consideration of the medical fraternity.

OBSERVATION II.—Was called March 5, 1891, to visit Mrs. G. W., aged sixty-one; weight 170; full habit; sanguine, of bilious temperament.

In December, 1888, she suffered severely from the passage of gall-stones. Since that time she has been troubled with chronic constipation. Found her with severe headache; some cough; dull, continuous pain in the epigastrium and right hypochondrium; vomiting at intervals; temperature 100; pulse 56; anorexia; bowels constipated, urine almost an olive color; chilly sensations and aching pains throughout the limbs. History of exposure; sclerotic coat and skin jaundiced; cutaneous pruritus; liver normal in size, but upon palpation gall bladder thought to be recognizable. Has been sick about two days. Diagnosis of catarrh of the bile ducts was made.

Patient was given calomel, gr. ¼, with bis. sub. nit. grs. 5, every three hours; also a capsule containing quinine sulph. grs. 11½; Dover's powder, gr. ½, every three hours, and a simple expectorant with ammon. muriate and sptrs. æther nitros. Following day, phosphate soda was given in additional, and a physic was had late in the afternoon. Discontinued the calomel and bismuth, and gave instead, chionia, dr. 1, every three hours. Vomiting ceased after the physic, and skin was soon less jaundiced; urine better color. Patient continued to improve, and about the fifth day was given the following prescription:

℞.—Tr. nux vom..... ℥ij.
Acid nitro muriatic..... ℥1½.
Tr. gentian..... ℥½.
Maltine, pepsin and panc.
Ess. pepsin (mer.).....āā q. s. ad oz. iv.
M.—Sig. Teaspoonful after meals.

Patient continued to take chionia three times a day. She made a good recovery about two weeks from the beginning of the attack.

This we believe to be a case of catarrh of the bile ducts following exposure, and a chronic irritable condition of the ducts, as a sequel of gall stones.

OBSERVATION III.—Was consulted the 5th day of last February by Mrs. George M., a farmer's wife, aged thirty-six; weight, 150; full habit; bilious temperament, from whom I elicited the following history:

About eight years ago patient had an attack of acute hepatitis, which confined her to her bed for a number of weeks; she finally made a slow but complete recovery, and had suffered no trouble since from that attack. Last September she was confined to her bed about three weeks with what was said to be malarial fever and neuralgia of the stomach, complicated with some liver trouble. At the time of consulting me she had not regained her former vigor; was complaining of a bitter sticky taste, at times headache; anorexia; bowels constipated; a dull, heavy feeling in epigastrium and right hypochondrium; weak in body; very irritable; loss of energy; tongue coated; tenderness upon palpation at epigastrium; very slight jaundice; pain in stomach shortly after eating and at times vomiting; sleep interrupted by bad dreams.

A diagnosis of catarrh of the bile ducts, with gastro-duodenal catarrh, was made. A short time after her visit to me I had a talk with the physician who attended her during her last illness. He acknowledged to me that he now believed that she was a sufferer at that time from catarrh of the bile ducts, with some malarial complication.

I gave her the following prescriptions:

℞.—Tr. nucis vomicæ..... ℥ij.
Acidi nitro-muriatici..... ♏xlv.
Listerinæ..... ℥ij
Fl. ex. gentianæ..... ℥1½.
Maltinæ cum pepsinæ et pancreatinæ,
Ess. pepsinæ.....āā q. s. ad ℥iv.
M.—S. Teaspoonful after eating.

Also:

℞.—Fl. ex. cascara sagrada..... ℥½.
Fl. ex. podophylli..... ℥ij.
Fl. ex. chioniæ.....q. s. ad ℥iv. M.
Teaspoonful two to four times a day, as is required, for moving bowels. The diet was restricted.

She refurned again February 13, and showed but little signs of improvement. The same treatment was continued.

She returned on the 22d, and this time tongue was clean; bowels regular; appetite fair; complexion clear; cheerful; no pain after eating; gaining in strength; energetic; sleeps well. She continued to improve for the following two weeks, when she was discharged cured.

This case simply illustrates a chronic condition following an acute attack, which did not receive an early diagnosis.

We trust that these cases are sufficient to exemplify the line of thought which we have tried to carry out, and also illustrates our ideas in regard to treatment. Other cases might be mentioned, and many things of interest discussed, but the limits of this paper will not permit.

THE HIGHER EDUCATION AND ITS EFFECTS ON THE HEALTH OF THE WOMAN OF TO-DAY.

BY J. S. BRAUNSWORTH, M.D.

POPULAR opinion would lead us to believe that the savage races surpassed us in general physical vigor and endurance. But we see only the survivors of a process, which has cut off and weeded out all their delicate, weakly children which our more careful housing, nursing and skilled medical care has made possible to bring to maturer age. Mortality among negroes in Africa is very great, beginning with umbilical hernia at birth. In Panama and Darien scarcely one in a family of twelve will survive.

Scrofula is common in China, Japan, Arabia, and among all Hindoo races. Scarlatina, diphtheria, and infantile convulsions carry off myriads, and variola decimates whole tribes of Indians and Mohammedans. Improved sanitary regulations save many children among our civilized races, and weakly, puny, children are carried through infant classes, and from primary grades into our grammar and high school grades, there to meet increased strain on body and mind. Any existing tendency to tuberculosis or mental trouble, any defects in constitution, crop out, and as puberty approaches are aggravated and assume active forms, owing to the wrong custom of building school-buildings several stories in height.

Steps are traveled daily, yes, many times daily, and the result is permanent injury to the child.

A very little attention to this point, when the building of school-houses is discussed, would soon do away with this great source of injury. One flight of stairs, or two at most, broken by broad landings, at intervals, is as much as any child can safely stand. Now, with all this weak material saved by skilful medical care, good nursing, and hygienic housing, given good, wholesome, nutritious food at regular meals, there would be very few breakdowns in our high schools; but for one added source of great danger. "Society" and "social entertainments" thrust out their claim. Entering our high school, the little "miss" is getting large enough to attend parties and other evening entertainments. It takes two or three days to get ready for the party. Her mind all off her lessons, recitations overlooked, or hastily glanced at. Party comes off. Child lives in the glare of lights, and hubbub of excitement, and you all know how tired a strong person will feel after such an evening. This child aggravates this by partaking of rich food at an unseasonable and unreasonable hour, probably partakes of ice-cream, stomach is chilled, often menstruation checked. Then goes home at a late hour. Sleeps a dull, heavy sleep, headache next day, and disordered stomach for a week, mopes around for a day or two, and then returns to school and finds classmates have gained, and she has lost. She copies and

is detected, bad feelings are aroused among classmates.

In a few weeks the whole programme is repeated; when examinations come, fear, anxiety and mortification induce a feverishness which makes matters worse, and discouragement and a break-down result, and the high school and hard lessons get the credit for what they had nothing whatever to do with.

Years of experience, common sense and a strict limit of school-hours regulate the amount of work safe for children to do, and a break-down is an unknown thing where there are no outside complications. Dr. Hornibrook struck the keynote in his paper, at Keokuk, when he spoke of "growing youth and early hours."

I can not find words strong enough to emphasize this point. Our girls will not break down under the strain of our "higher education," when this first law of nature is not broken.

Mr. Seymour, of Boston, says, in an article in one of our educational journals: "Were some law of gentle suasion to govern the youth of our land, which, without employing force, would compel our youth to retire to sleep at an early hour, making it an unusual occurrence, excusable only by sickness in the family, to remain up after 9 P. M., it would do away with half the sicknesses, three-fourths of the unhappiness and nine-tenths of the sins of the world, with all their attendant miseries."

In the primary classes, marching and countermarching, with simple physical exercises, rest mind and body.

Yet in older children the so-called "physical culture" exercises are often carried to excess, and girls who would faint if asked to help a tired mother at home, will, in the gymnasium, swing Indian clubs and go through exercises which so completely exhaust them, that they will be unfit for daily duties for several days, proving directly injurious instead of beneficial. Allow me to mention a few criticisms by prominent educators, which coincide with my own observations on this subject: "Look at your next public exhibition in the so-called physical culture classes."

Note the so-called "Greek costumes," vanity and egotism, watching the effect upon the audience. Posing and writhing, could you find anything more sensual in its effects upon the nerves of a growing girl? The glare of footlights, the voluptuous rhythm and swing, and judge for yourselves if it were not more fit for an exhibition of dancing girls in a harem, than in our high school classes. There is too much time taken from more important things which are neglected for this.

A reasonable indulgence in gymnastics, hearty outdoor exercise, even in cold weather, fewer steps to climb and early hours for sleep, and I defy you to show me a break down. The same rules hold good throughout our colleges and universities. Break one link of these hygienic rules, and a break-down results.

Another important question of the present day is the alarming increase of near-sightedness. Our best authorities claim this is largely the result of an indoor life, as it is seldom found among Indian tribes.

Classes of boys, under the care of a responsible teacher, should have camping-out parties for weeks at a time. Surely, geology, mineralogy, botany and kindred subjects could be taught by observation and practice by this method and, at the same time, cultivate that far sightedness for which the Indian is so famous.

Girls could make daily excursion through field and forest, short and not so fatiguing. A brief résumé of this entire subject would be, that the educated woman is healthier, for botany and geology are studies which require out-door exercise and observation, and once being thoroughly entered into, these tastes remain through life.

Every new stone or plant is pounced upon and eagerly discussed. Frowns of fortune and personal annoyance are speedily forgotten. The animated eye and bounding pulse surely banish all imaginary ills, and hysteria, headache and congested liver are left to those who can not get interested in the studies which nature opens to us.

There is no pebble so insignificant but shows the footprints of the centuries gone by. Mathematical accuracy required in study becomes a life habit.

A reason is required for each step of a problem, and this cool reasoning power is turned upon the affairs of daily life.

Contentment, coupled with untiring industrious perseverance, as a rule, lead to a higher position in life than the mere accident of money or fashion, which, at best, may only be temporary.

We can but concede that the effect of the higher education of woman is a permanent benefit to the woman.

PHENACETINE—SOME OF ITS EFFECTS IN THE NERVOUS SEQUELÆ OF GRIPPE.[1]

By WILLIAM F. HUTCHINSON, M.D.,
PROVIDENCE, R. I.

THE epidemic of grippe which occurred during the past winter exhibited some marked differences in its course as compared with previous seasons. In New England, for instance, we were brought to face novel symptoms, difficult to treat successfully, and, in most instances, passing into pathological states, which have remained permanent thus far, at least still under treatment.

In the tropics, where I spent the winter, I found the same train of symptoms and sequelæ exisiting as in America, with even a greater severity and a higher death rate. It is interesting to note that while the poison of grippe in the North was developed into pneumonia, and causing a large percentage of deaths in that way, Southern lands enjoyed almost an immunity from fatal cases, although, perhaps, equally prevalent, the beneficent climate of the winter months, with its unvarying heat range and steady dew point, serving as a complete protection to the lungs, and there has been little grippe in summer. When, however, the nervous centers were affected in place of respiratory, and nervous derangements took place of pneumonias, climate was no longer of any avail, and, as I write, May, 1892, there is probably a larger percentage of cases terminating fatally in the southernmost islands of the West Indies from nerve complications than we have ever lost. I learn that in Port of Spain, Trinidad, there were more than six hundred cases at one time within a month, with a large number of deaths from various neuroses.

Secondary to these, developing directly from them, we have seen so many psychic affections, that grippe is now recognized as cause sufficient therefor, there is now question of treatment only. Mental equipoise has been disturbed to such an extent that crimes of magnitude have been committed under its influence, and I have recently sent a woman to an insane hospital, whose unsettled mental condition I believe to be wholly dependent upon a severe attack almost two years ago.

[1] Read before the American Medical Association at Detroit, June 7, 8, 9 and 10, 1892.

Among special symptoms accompanying the neurotic side of grippe may be enumerated insomnia, loss of appetite, with steadily progressive physical debility, perversions of sense, impairment of cardiac nerve tone, hallucinations, delirium and insanity. Paralyses of certain centers are not uncommon, notably those for legs and sexual organs. Formication and exaggerated reflexes accompany these earlier stages, wherein treatment is likely to be successful, and in every instance with which I have been familiar there has been pain and skin hyperæsthesia.

It is easy to make a list of remedies such as total rest, foreign travel, highly nourishing digestible diet and competent nursing; but a large part of the average doctor's list of patients is made up of poor people to whom such luxuries are as unattainable as a steam yacht, and they must be replaced with what is within reach. Rest comes to such men and women only when their bed imprisons them, and careful nursing from a wife who has half a dozen little ones to look out for in a small tenement is out of the question. We must look for substitutes; find some artificial rest which will make the tired mother's task lighter by reason of a more quiet patient.

In such a search opium and its derivatives must be barred from the first. When, in the cases under consideration, any of them are administered in sufficient doses to procure sleep or relief from pain, disturbance of general function and subsequent reaction are too pronounced to permit of continuance, and depression too profound to allow them to be continued or even repeated. Something was needed that could be given for a length of time without increase of dose or loss of effect, for neuroses following grippe are usually of long duration.

Sulfonal produces sleep, but does not relieve pain. Antipyrine and antifebrine disturb heart action to a degree occasionally alarming, and, in a few cases, have caused temporary delirium. Chloralimid is better, but loses effect after lengthy administration. The various preparations of ether are too stimulating to circulatory centers, and choice seems to lie between such vegetable narcotics as hyoscyamine, hyoscin and the like, and phenacetine.

In a few instances I did well with a combination of hyoscin and memobromide of camphor, but in a majority the phenol derivative has proven the best. Indeed, were it not for a peculiar quality which phenacetine possesses, and sometimes brings into action, that of producing violent perspiration, it would be the ideal hypnotic and pain killer; and with this defect, which I have usually been able to correct by using it with quinine sulphate, in my opinion, phenacetine stands first in the list of remedies for relief of insomnia and pain in the permanent neuroses following grippe.

No general dose can be given, but I consider the drug harmless in any quantity that is likely to be found necessary, and have given 10 grains every two hours for two days with no bad result.

Phenacetine may be combined with iron for long administrations, and, in that form, presents the best tonic with which I am acquainted for the adynamic conditions of long continued nervous prostration, from whatever cause.

A VERY fine collection of tropical plants, including some of the largest specimens, will be sent from Jamaica to the World's Fair. The arrangements for their transportation have already been made.

ON METHODS OF ILLUSTRATING LECTURES WITH A LANTERN-SLIDE EXHIBITION OF INJURIES AT THE VAGINAL OUTLET.

By HOWARD A. KELLY, M.D.,
Professor of Gynecology and Obstetrics in the Johns Hopkins University.

GYNECOLOGY is par-excellence that branch of medicine best adopted to objective teaching. Simple didactic lectures are thus often, for want of the object, tedious and uninteresting. An attempt to overcome this difficulty by the use of diagrams renders it necessary for the lecturer either to be an artist himself, or to depend upon the market supplies of certain colored plates. This latter means of teaching is unsatisfactory, as the individuality of the teacher is lost sight of in the stereotyped work of another.

I have, for some months past, since the establishment of the Kensington Hospital in Philadelphia, made use of photography for the purpose of securing good pictures of my cases. I was thus enabled afterwards to use the photographs for demonstration.

I show you here some excellent photographs, 4 x 6 inches, thus made, valuable to pass around a class from hand to hand.

Here, also, I show you further development of this idea—a series of enlarged bromide plates exhibiting the subject more than life-size. This mode of illustration has a soft tone which is pleasing to the eye; it is as well admirable for lecture demonstrations to a small audience.

Recently I have been using another method of demonstrative teaching, that is, by the use of lantern slides. I consider this last the most perfect means of recording cases for future comparison and study. It enables also any subsequent tenant of the gynecological chair, which I am now occupying, to have vividly placed before him at any moment any series of similar cases which may have passed through the hands of his predecessor.

One great merit of the lantern-slide also is the perspective which gives an exceedingly life-like appearance to the subject. The picture can also be made of any desired size from two to ten feet in diameter, suitable for small or large audiences.

Parturient injuries to the vaginal outlet, of which I desire to speak this evening, are especially adapted for this kind of demonstration. The position of the injury near the exterior of the body allows good illumination, and thus renders it possible to take a satisfactory photograph.

Injuries to the vaginal outlet are of three sorts:

First, involving the external anterior part of the perineum, that is, the tissue from the fourchette backward toward the anus and upward toward the vagina. This is a superficial tear of no serious moment. From its position, however, and from the fact that it is so conspicuous after birth, it is the one form most frequently noted.

The second form is the complete tear involving the whole of the recto-vaginal septum. Here the sphincter is ruptured, and, as a consequence, the patient is unable to control her bowels or gases. The importance of this form of injury depends upon this fact, while the fact that a prolapsus is so rarely associated with it shows that the perineal body is not the supporting structure of the pelvic organs, as it is supposed to be.

The third form of tear is the internal; that is, where the rupture lies in the right or left side of the vagina, or both, and can only be seen on drawing apart the labia and lifting up the anterior vaginal

wall with the speculum. This tear, therefore, is concealed, and is rarely seen. It is, however, from its frequency and its effect, the most important of all, for the result of such an injury is relaxation of the vaginal outlet. The rupture in the sulci extends down into the tissues separating the levator ani from its rectal attachments; the muscle is, therefore, no longer able to hold the rectum up under the pubic arch. The anus drops backward, the vaginal walls roll out, and often without any external injury whatever, or even with an external perineum larger than normal, from the over-stretching. Extensive eversion of the vagina, with descensus of the uterus, is one of the sequences of the inside tear.

Here in these lantern-slides which I am now placing before you, you see a series of pictures most perfectly demonstrating these various conditions. Most conspicuous is the broad perineum, the pouting anus, the flat gluteal cleft, the wrinkles gathered round the lower part of the vaginal outlet, and the gaping, open vagina. This condition is exaggerated on burying the thumbs on either side of the outlet deeply into the tissues, when the eversion is more marked. Place the patient in the side position, and the air rushes into the vagina, and the posterior wall drops back from the anterior, exposing the orifice of the vagina as a large hole.

Another valuable test of the relaxed outlet is by hooking the index fingers within the vagina and retracting the posterior wall, when the whole of the vagina, and even the cervix uteri, may thus be exposed. The fingers thus serve as a speculum in a manner impracticable in the sound outlet.

The disabilities occasioned by the relaxation are characteristic. These women feel the sense of bearing down, dragging in the lower part of the stomach, and pain in the back, due to the tendency of the uterus and pelvic viscera toward the vaginal outlet. They tire very easily, being incapable of prolonged exercise. The most comfortable position is lying on the back in bed. These local troubles, associated with other ailments which are pretty sure to follow, in the shape of reflex nerve tire, render women with a relaxed outlet half invalided.

The operation for such injury is resection of the relaxation. It is often claimed as a merit of one particular form of operation that it does not sacrifice any of the tissue. In these cases this is no advantage, as it is impossible to restore the normal tonus of the parts, and the best treatment is to take out of the relaxation just enough tissue to bring it back again to the normal size.

It is not proper to confine this resection of the vaginal outlet to the exterior alone. The injury is more on the inside, and for this reason the operation is also made to extend up the vagina by making the denudation or resection in both the sulci and across the lower anterior face of the posterior vaginal wall. Two triangular areas of denudation point up both sulci; in these the tissues on either side are loosely approximated by means of a single silkworm-gut suture to each sulcus. This I call the tension suture. A number of catgut sutures are then able to do the work of approximation above and below this. This loose approximation work is the proper office of catgut. It must never be used where there is much tension.

The lower part of the denudation is brought together by silkworm-gut sutures passed in a transverse direction. An outlet thus restored appears perfectly normal, or even virginal. If you were to examine such an outlet a year or two after operation, you would say that the woman had an intact perineum and had never borne children. I know of no other mode of treatment which does as much as this.

WOMAN'S PROVINCE.

By JOHN WELSH CROSKEY, M. D.

SIR J. Crichton Browne describes the anatomy of the female brain as much smaller in size and lighter in weight than that of the male, and maintains that she is absolutely deficient in the physiological conditions of idio-plastic power. Out of nine hundred and fifty male, and six hundred and fifty female brains examined, the brain of the males was, on an average, 127.68 grammes (4.50 ounces) heavier than that of the female; but, allowing for the difference of stature, the male average being five feet seven inches, the female five feet two inches, the proportionate excess of male brain was 1.05 ounces. As this difference is also found in savage races, it is not due to the superior education of the male sex. The internal carotid and vertebral arteries, which feed the brain, are larger in diameter in the male than in the female. The combined diameter is 8 2 millimeters in the male and eight millimeters in the female. Then the blood going to the female brain only contains 4,500,000 corpuscles to the cubic millimeter, while the blood of the male contains 5,000,000 corpuscles. The anterior region of the brain is comparatively more copiously irrigated with blood in men, and the posterior region in women.

On the blood supply our activity depends, and the portion of the brain which has the best irrigation in the male corresponds with the powers of volition, cognition, and idio-motor processes; whereas, women are stronger in the part of the brain concerned in the sensory functions. Thus, the size of the cerebral arteries corresponds with what we generally consider to be the intellectual and emotional differences of the sexes.

Amongst the unicellular organisms the conjugate cells are exactly alike, and do the same work in the world; but, amongst multicellular organisms, they are dimorphic, and, from that point upward, differentiation in structure and function goes on. This does not mean that one sex is better than the other. Separate they are infirm; in union they are strong; in competition they are mutually destructive. It is from the sympathetic accord of the differentiated sexes that human progress can alone be hoped.

The growing tendency to prepare young women for professions which have been so far allotted to men, must finally have a disastrous effect upon society. It is not to be disputed, however, that a woman whom chance throws upon her own resources, finds it more difficult every day to make an honorable livelihood; nor is it denied that if she has been duly prepared by a liberal education, she can the more readily find employment in a field exclusively occupied hitherto by men, because her services can be otained at a lower rate of remuneration.

A woman as an attorney-at-law, or as a civil engineer, is an anomaly. Where is the man who, having secured an independent position in life, and wishing to marry and create a home, will take to his heart an attorney-at-law, a civil engineer, or even a doctress, as the woman to be the mother of his children. The mission of woman is far superior to that which the drift of modern American ideas would ascribe to her. In fact, the *rôle* she is intended to play is more important than that of man.

Man will study the sciences, discover the laws governing matter, apply those laws to his worldly welfare and create wealth; he will build gigantic railroads, establish vast steamship lines linking far-away continents together, put in operation innumerable industries, all centering towards his personal comfort. It must, however, be conceded that all these pursuits, absorbing man's entire activity, are exclusively material, administering to the wants and needs of the body only, leaving in utter oblivion and neglect the spiritual and nobler side of his nature.

Woman's province and destiny is to stand by the side of man as a faithful watcher, a loving guardian, a spiritual companion, the salutary influence of whose presence will silently and constantly remind him of a sphere of activities higher than those of the material plane upon which his daily avocation compels him to live. After a busy day spent in pursuits and calculations intended to increase his worldly possessions, pursuits and calculations often in conflict with the higher principles of ethics, when returning home at night, the husband and father should feel that he is entering a temple at whose outer door all business cares should be laid aside, a temple whose very atmosphere is pure and elevating, the presence of whose presiding goddess is a constant incentive to higher and nobler thoughts, and whose affection is worthy of all human effort and sacrifice.

In such a home, man must needs regain, through this higher train of sentiment, more than he loses daily through the debasing influences inseparable from a modern business career. In the presence of such a wife, he feels a better man. She is a living appeal to the higher side of his nature. The purity of her soul, the refinement of her mind, are constant incentives to nobler activities.

"He is a half-part of a blessed man,
Left to be finished by such as she;
And she a fair divided excellence,
Whose fullness of perfection lies in him."

3325 POWELTON AVE., PHILADELPHIA, PA.

A CASE OF BROMOFORM POISONING.

BY W. B. PLATT, F.R.C.S. (ENG.),
Surgeon to the Garrett Children's Hospital; Surgeon to Bayview Hospital; Demonstrator of Surgery University of Medicine, Baltimore, Md.

A. B., three months old, breast baby, was brought to the Garrett Dispensary for Children, May 16, 1892, suffering with plain symptoms of pertussis. He was a fat, strong infant. He was given a solution containing in each drachm dose 2 mimims of Merck's bromoform, and 10 mimims of whiskey in equal parts of syrup and water, to be taken three times daily, and well shaken before each administration.

The mother did not again visit the dispensary until the poisoning occurred two weeks later, May 31.

She claims to have given the medicine as directed, with no ill effects, except a slight lessening of the appetite, and with a decided diminution of the paroxysms of coughing, until the last dose in the bottle was reached, which was not quite one teaspoonful. This was given at 11.30 A.M.

At 12, noon, the child was noticed to be weak in its limbs, and rapidly became limp and unconscious. The infant was brought to the dispensary at 12.30 in the following condition: Unconscious, cannot be roused in the slightest degree by cold sprinkling of face, shaking, etc.; inspiration shallow, not markedly abnormal in number to the minute; pupils contracted almost to pin point; eyeballs not rolled up as much as in natural sleep; no strabismus; muscular relaxation; no twitching or spasmodic contraction; skin cool, color of skin everywhere pale; no cyanosis or flushing of face; liquids put in mouth are swallowed very imperfectly; odor of bromoform in breath. The child has had no stimulant or treatment of any kind before entering the dispensary, or no other medicine than the bromoform solution, according to the mother's statement.

Vigorous treatment was now instituted as follows: A woven "English" catheter was warmed, oiled and introduced into the stomach through the mouth, over the finger on the tongue. About 8.02 of warm water was slowly injected into the stomach by means of a Davidson's syringe; this was done three times in succession. Nothing but clear liquid escaped each time by siphonage, lower bowel.

He was now well washed out by slowly injecting, by means of a fountain syringe, about one quart hot water, allowing it to escape by spontaneous contraction of the intestine along side of the catheter, which was introduced about four inches. Five drops of aromatic spirits of ammonia were given twice at five minutes intervals in 2 drachms of hot water.

These procedures increased the number or depth of respirations. They seemed to me to be due to the spirits of ammonia.

There was still no signs of consciousness. A handkerchief dipped in cold water was now placed across the forehead, reaching to the temple on either side; another one below the occiput, the child lying on a table.

A small sheet was now dipped in quite hot water, and wrapped entirely around the thorax or upper abdomen. This was repeated twice (thrice in all), at intervals of four minutes.

This powerful stimulant to the thoracic or upper abdominal viscera or spinal cord, had an almost immediate effect. At 1.15 P.M. the child swallowed, opened his eyes, coughed, moved arms and legs, cried a little, pupils dilated to normal size, and in a few minutes more he was quite himself again. The child was under treatment in all three-quarters of an hour before regaining consciousness. Said to have been unconscious one-half hour before this, making one hour and a quarter in all.

It is impossible to say how much bromoform the child took, or whether it was a cumulative effect of the last few doses.

It is quite likely that the solution was not thoroughly shaken immediately before administration. The liability of bromoform to separate in small globules from the containing medium is well known, unless it contains considerable alcohol or glycerine. This is the only untoward effect I have had after using bromoform in a number of cases of infants and children.

Society Notes.

CLINICAL SOCIETY OF MARYLAND.

Baltimore, Maryland, May 6, 1892.

THE two hundred and sixty-sixth regular meeting was called to order by the President, Robert W. Johnson.

Dr. Geo. H. Everhart was elected to membership.

Dr. Howard A. Kelley introduced to the Society Dr. Weigert, of the Rotunda Hospital, Dublin. Dr. Weigert was invited to take part in the proceedings.

DR. H. A. KELLEY then spoke on

INJURIES TO THE VAGINAL OUTLET,[1]

illustrating his remarks by many beautifully prepared photographs thrown upon a screen by a stereopticon. The photographs were all taken from cases under Dr. Kelley's care, both in Philadelphia and in the Johns Hopkins Hospital, Baltimore, and illustrated the operating room, normal vaginal outlets, injured outlets of different kinds, and the various steps in the operation for restoration.

DR. J. EDWIN MICHAEL agreed with Dr. Kelley that the essence of this whole matter is the amount of damage inflicted upon the sphincter ani muscle. Sometime a long perineum is a better indication of internal trouble than a torn perineum.

The operation referred to by Dr. Kelley, in which no tissue is lost, can hardly compare with the operation which Dr. Kelley practises; it cannot take up the broken ends of the sphincter, and tuck them up under the pubes, and that is what is wanted in these cases.

We are apt in these cases to do too much, and to make the vaginal outlet too narrow. The point on the labium, at which the normal cleft ceases, is comparatively easily determined, and this enables us to give the proper size to the external opening; but in our internal denudations we are inclined to do too much and produce too great narrowing.

I recently attended a patient in labor who had previously had a tear repaired by the method which has been explained by Dr. Kelley. The new-made perenium withstood the trial of a second labor, and is now about as good as before the labor occurred.

We ought to be thankful to Dr. Kelley for taking advantage of the circumstances with which he is surrounded and illustrating the subject in this vivid way.

J. H. BRANHAM: The tear of the levator ani muscle may sometimes be extensive without any laceration of the mucous membrane; and, on the other hand, mucous membrane may be extensively lacerated with very little laceration of the muscles. Nature, of course, attempts to repair these damages, but the general practitioner, in allowing his patients to move about and sit up too soon, thus allowing pressure from above on the torn muscles, interferes with the efforts of nature. The condition should be recognized and the patient kept long enough in bed to permit of thorough repair.

DR. HARRY FRIEDENWALD read a paper on

CRANIAL DEFORMITY AND OPTIC NERVE ATROPHY.

DR. G. J. PRESTON thought the nerve atrophy was due to certain inflammatory conditions of the meninges and special pressure, and not due to general intracraninal pressure.

The operation of linear craniectomy has not been a success thus far. The operation gives an opportunity for brain expansion, but very little. The damage has usually been done before the operation is undertaken.

DR. FRIEDENWALD: In case of tumors of the brain which are found far away from the anterior part of the brain, optic neuritis follows, and it is very hard to account for it except on the theory of increased intracranial pressure, and my suggestion was that in cases of marked cranial deformity we are probably likely to have at some period a time when the intracanial pressure reaches the same height as it would in a case of intracranial tumor.

[1]See page 649.

DR. I. E. ATKINSON narrated a case of

RAPIDLY GROWING INTRA-THORACIC TUMOR,

ending in death by suffocation in six weeks after first consulting his physician. The tumor, an aneurism of the innominate artery, was exhibited by Dr. K. B. Batchelor. W. T. Watson, *Sec'y.*

1519 N. BROADWAY, BALTIMORE.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated Meeting May 20, 1892.

HENRY LING TAYLOR, M.D., Chairman.

CONGENITAL DISLOCATION OF BOTH PATELLAS.

DR. S. KETCH presented a little girl who, at first glance, seemed to have only knock-knee, but on flexing the limbs, a complete dislocation of the patella downward and forward was observed, and the dislocation could be readily reduced by extending the limb. The deformity was much more marked on the right side. The condition was probably congenital, although it had not been noticed by the mother until recently, as the child was able to walk with no more difficulty than is observed in an ordinary case of knock-knee. Dr. Shaffer had suggested that this was the opposite of the condition which he had described under the head of elongation of the ligamentum patellæ at the last meeting of the American Orthopedic Association.

DR. JOHN RIDLON said that he had seen three such cases in the practice of the late Mr. Thomas. The treatment had consisted in hammering the deficient condyle with an egg-shaped wooden mallet, and in two of the cases the treatment had already effected sufficient development to prevent dislocation, and in the other case the treatment had only been just begun.

DR. W. R. TOWNSEND said that he had presented sometime ago to the Surgical Section of the Academy of Medicine a colored girl who could, by muscular action, produce at will a complete dislocation of both patellæ, either to the outer or the inner side. A knee-cap was applied, and an effort made to restrict the movements of the fibers of the vastus externus and internus which seemed to be abnormally developed. She was kept under observation for six or eight months, and at the end of this time she could not produce the dislocation at will, and the dislocation occurred quite infrequently.

DR. N. M. SHAFFER said that in his case of elongated ligamentum patellæ, the man had had a fall which was followed by an outward dislocation of the patella on the right side. After consultation with several other surgeons, in view of the fact that the inter condyloid notch was filled by an exostosis, it was considered best to make no attempt at reduction, and at present, although the patella lies on the outer aspect of the joint, the man is perfectly able to walk ten or fifteen miles a day. In the case just presented, he did not think the external condyle was deficient, but the ligamentum patellæ was so short that the patella instead of passing over the trochlea, is drawn

down to a point where, owing to the knock-knee, it is very easily dislocated. On this account, he thought that treatment directed towards securing an elongation of the ligament would be more apt to prove successful than simply hammering the outer condyle.

DR. KETCH, in closing the discussion, said that he agreed with the last speaker as to the inadvisability of resorting to operative measures. Not long ago he had seen a young lady with a somewhat similar condition. Twelve years before the patella had been dislocated by muscular action, and this had again occurred shortly before he saw her. Reduction was easily effected by extending the limb.

DR. ROYAL WHITMAN presented several patients:

CASE I. A girl, fourteen years of age, to illustrate the appearances in non-deforming club-foot. As in many similar cases, the history was one of awkwardness in walking for many years, with increased pain and discomfort during the past six months. She presented the calluses on the balls of the feet, the contraction and tenderness of the plantar fascia, and the limitation of dorsal flexion to which Dr. Shaffer had called attention in his original communication.

CASE II. A woman, fifty-seven years of age, who had suffered from chronic rheumatism for many years. On the left side, the contraction of the plantar fascia had thrown the foot into a position of equino-varus. There was no deformity of the right foot, but on both sides, a well-marked limitation of dorsal flexion. The electrical reactions were normal. The condition was similar to non-deforming club-foot, and was apparently the result of a rheumatic inflammation.

CASE III. A girl of fourteen, with marked spasmodic flat foot. The case was presented to illustrate the extreme and progressive deformity and disability in this class of cases, which could be easily and quickly relieved by the method of treatment to which he had, on several occasions, called the attention of the Society.

CASE IV. A girl of eighteen, with persistent adduction of the right foot. Although there was no evident deformity, the foot was held in an abducted position by spasm of the peroneii and extensor longus digitorum muscles. The condition was the result of a slight sprain three months before. The symptoms were pain, fatigue and insecurity in walking. The case illustrated the condition in so-called chronic sprain of the ankle, which practically never recovered, because the foot, being unbalanced by irregular muscular action, was constantly subjected to injury. When the condition was recognized, a cure could easily be accomplished by restoring the normal muscular action. The patient being etherized, the foot should be forced into a position of extreme equino-varus. All adhesions were thus broken up, and the contracted muscles were stretched. The foot was then placed in plaster of Paris, and later, by massage, exercises and a temporary support, the patient could be completely and permanently cured.

DR. R. H. SAYRE thought that in the fourth case there may have been a fracture of the lower part of the fibula, complicating the sprain, which had been overlooked in the treatment of the case immediately after the injury.

DR. KETCH thought that the fourth case gave evidence of a possible osteitis about the ankle joint, and this condition should be carefully excluded before adopting the treatment proposed.

DR. WHITMAN said that he found no indications of an osteitis in the fourth case, and that there was no history or present indication of fracture complicating the original sprain.

DR. SHAFFER said of the second case, that the exaggerated extension of the toes, and the shortened plantar tissues were characteristic of non-deforming club-foot. He had seen several cases where the symptoms had not become prominent until the age of thirty-five or forty years was reached, and then, whether there was a rheumatic diathesis or not, all the symptoms would be greatly exaggerated. Many cases showed much less deformity than that exhibited in Dr. Whitman's case. The typical non-deforming club-foot showed little or no deformity as such, unless it was sought for and found in the shortened plantar and post-tibial tissues. The lack of proper length prevents normal antero posterior movement at the ankle, and in the tarsal joints, and the entire weight of the body falls upon the "ball of the foot" in locomotion. It is far more common than is generally supposed, and with the use of the antero-posterior traction shoe, there is no necessity whatever for a division of the resisting tissues.

DR. R. H. SAYRE thought the second case presented very much the condition found in ordinary cases of chronic gout and rheumatism, and he had noticed that after the foot had been manipulated somewhat, she was able to move it much better than before, and could voluntarily flex the ankle beyond a right angle, so that it did not seem to be a case of non-deforming club-foot.

ANKYLOSIS OF THE HIP.

DR. IRVING S. HAYNES, present by invitation, exhibited a specimen of this condition, which he had found in the dissecting room of the University Medical College. The subject was a man about twenty-five or thirty years of age. The limb was slightly flexed, adducted, and rotated inward. A sinus opened about half an inch below Poupart's ligament, and one inch internal to the anterior superior spinous process. It passed backward, soon divided into two tracts, one leading down to the front of the great trochanter, the other up under Poupart's ligament into the iliacus, and then into the obturator internus muscles; then around the middle of the outer border of the obturator foramen into the cotyloid notch, and so into the hip joint. The iliacus and obturator muscles, as well as all the muscles acting upon the hip joint, had undergone extensive absorption and fibrous degeneration. The center of the disease, and the starting point, seemed to have been in the head of the femur, but there was also a focus in the epiphyseal line of the great trochanter, which communicated with that found in the head of the femur by a sinus running through the neck, and also opened in front through one or two small openings. Another sinus seemed to have led from the acetabulum through the cancellous portion of the ilium into the iliac fossa, where the opening was surrounded by bony formations. Between the ilium and sacrum there was slight mobility of a gliding nature, which the speaker had never observed before, and which was probably intended to partially compensate for the lack of motion at the hip. There was no evidence of the disease in the capsule of the joint. The abscess cavities were limited to the absorbed portions of the iliacus and obturator internus muscles.

ARTHRITIS DEFORMANS.

DR. HAYNES also exhibited a specimen of this condition, showing erosion and reproduction of bone, with a depression in the acetabulum, and a disappearance of the ligamentum teres. The motions of

the joint were slightly limited in every direction. The specimen was removed from an old subject.

THE TREATMENT OF LARGE ABSCESSES IN POTT'S DISEASE.

DR. W. O. PLIMPTON presented several cases of Pott's disease, with large abscesses, as an illustration of the treatment which he advocated. He did not favor aspiration, because he thought after this had been done the abscesses were likely to continue to enlarge and burrow into the tissues. While admitting that abscesses were not infrequently absorbed, he wished to deprecate the let-alone treatment of large abscesses which tend to burrow deeply into the tissues, threatening to inoculate these tissues, often causing mechanical deformities of other parts.

The first case was a boy, about twelve years of age, who had had Pott's disease since he was three years old. The disease followed closely upon a blow from a brick. When he first came under the speaker's care last July, he was very anæmic and weak, with an afternoon rise of temperature. There was a very large abscess situated beneath the glutei muscles, and there was much deformity of the leg, viz.: apparent shortening, inward rotation, and adduction, caused by the abscess. Free incision evacuated a large quantity of fluid, together with broken down tissue. An examination with the finger showed no involvement of the joint. The diseased parts were thoroughly curetted with a Volkmann spoon, a counter-opening made, and three drainage tubes inserted. After washing out the cavity with a weak bichloride solution, the superficial cavity was obliterated as far as possible by means of sutures, and primary union occurred except at the site of the drainage tubes. Two of the tubes were gradually withdrawn. The third one, in front, still remains in for drainage, although it has been considerably shortened. The apparent inequality in the length of the limbs has disappeared since the operation, and with a plaster jacket to support the spine, he is able to go to school, and to play with other children. The discharge is steadily becoming less.

The second case was a girl, seven years old, whose disease dates back to a fall about three years ago. When first seen one year ago last January, there was a moderately large abscess, which was opened, and a tube six or eight inches long inserted. The tube has been gradually shortened until it is now three inches long; the discharge is diminishing, and the patient's general health has markedly improved. Another case was treated in a similar manner, and has steadily improved since the operation. In all there has been a gradual reduction of the temperature after the operation. The same precautions were observed as in any cutting operation where it is the intention of the surgeon to secure primary union, and after the operation care was taken to keep the wound and dressings aseptic.

DR. W. R. TOWNSEND said that the location of the tube in the first case reminded him of an accident which occurred about one year ago. He was hastily summoned to the hospital on account of one of the patient's having a hemorrhage. He found that a case of large psoas abscess, which had been opened and a drainage tube inserted three weeks before, had suddenly begun to bleed profusely. The hemorrhage was arterial, and with the assistance of Dr. W. T. Bull, he cut down and found that the pressure of the drainage tube had caused a large perforation in the femoral artery. He accordingly tied the artery above and below the perforation, and the child recovered without further accident.

DR. KETCH thought the cases presented very much the appearance of those which he had seen in the hospital, when it was the rule to open all abscesses as soon as the abscess approached the surface. They did not seem to him to differ materially in their course from those where the abscesses were allowed to open spontaneously, and he could not see that anything had been gained by this method of treatment.

DR. RIDLON asked if the drainage tube had been left in for so long a time for fear that the opening would close up, and necessitate another operation. He had always thought that it was not necessary to leave in the tube more than a few days.

DR. A. M. PHELPS thought that the second case had a decided advantage over the first in being subjected to the operation at a much earlier stage. The slightest increase in an abscess, in his opinion, warranted prompt incision. He spoke emphatically because the Section had almost been committed to the idea that it was better for these abscesses to take care of themselves. But it must not be forgotten that these abscesses were originally collections of tuberculous material, and that when they became infected with pyogenic germs, as almost inevitably occurs, there will be a rapid burrowing of the pus. Another reason for opening these abscesses is that they exert an injurious effect by the internal pressure of the exudate upon the carius foci in the diseased vertebræ, keeping them bathed constantly, and furnishing a fertile source of the subsequent breaking down of these vertebræ, and of a consequent increase in the deformity.

DR. KETCH thought that the previous speaker had not correctly stated the position of the Section on this subject. He thought it would be more correct to say that they took the ground that so many of these abscesses disappeared spontaneously under proper mechanical treatment, that something more than mere accident was necessary to explain it, and that those collections of pus cause injurious pressure had not been proven. The proof of this would be found in a marked increase in the size of the deformity, but in disease of the dorso lumbar spine, where these abscesses were the most frequent, this did not occur, and Dr. Myers had recently presented a boy who had had two large iliac abscesses disappear spontaneously, and yet there had been no increase in the kyphos, as shown by repeated and careful tracings.

DR. SHAFFER said that extensive observation had taught him that with efficient mechanical treatment, the abscesses of Pott's disease almost uniformly pursue a benign course, and he believed that the time would come when those who now operate will see their error. He had seen in the practice of some of the best surgeons in this city, deaths occur after operating upon just such abscesses. When an abscess is very tense, and there are severe local or constitutional symptoms, all recognize the propriety of incision, but ordinarily, these abscesses are flaccid and do not cause any such "damming up" and injurious pressure as had been described by Dr. Phelps.

DR. WHITMAN could see no good reason for waiting until the abscesses appeared below Poupart's ligament. When first discovered, they should be aspirated, and if this fails, iodoform emulsion should be injected. Surely a method of treating the abscesses of Pott's disease which yielded in the hands of Bruns fifty successful cases out of fifty-two, and of Fraenkel, eighteen out of twenty, was one which deserved a fair trial before resorting to severer measures. If aspiration and

the injection of iodoform emulsion proved unsuccessful, the method of evacuation recommended by Barker and Treeves with immediate closure of the wound, might be employed before resorting to open drainage.

DR. PLIMPTON, in closing the discussion, said that the tube had been left in for free drainage, as it had been found that where it was removed shortly after operation the exuberant granulations choked up the sinus, and gave rise to a great deal more trouble and discomfort than where the tube was retained. At the time of the operation, he had had in mind the possibility of accident from having the tube in too close proximity to the femoral artery, and in this particular case there were dense cicatricial barriers between the tube and the artery. Small, and not readily accessible abscesses should not be interfered with unless they cause some disturbance, but he would not hesitate, if circumstances seemed to demand it, to open them above Poupart's ligament. The existence of intra-abscess pressure, and its effect upon the general health was well demonstrated in one case in which he removed about half a pint of the contents of the abscess by aspiration, with the result of causing an immediate return of the child's appetite, and a prompt relief of his pain. He had seen the iodoform emulsion used in a number of instances without apparent benefit. In considering the percentage of abscesses which disappear spontaneously, it must be remembered that many of them are small abscesses, or are nothing but fluid in the joint, so that the statistics on this point were very defective.

A CONTRIBUTION TO THE STUDY OF NON-DEFORMING CLUB FOOT.

DR. L. W. HUBBARD read a paper with this title.

DISCUSSION.

DR. PHELPS objected to the name, "non-deforming club-foot," on the ground that all cases he had seen presented deformity.

DR. SHAFFER said that when he first called the attention of the profession to this subject, this name had suggested itself to him because all the conditions of club-foot were present except the deformity, which was so slight that it had hitherto escaped observation.

DR. V. P. GIBNEY said that the condition described some years ago under the name of metatarsalgia might be confounded with non deforming club-foot. These patients usually complain of pain after sitting for sometime, as in the theater. He had treated a few cases of non-deforming club-foot by division of the tendon and plantar fascia, over-correction, and retention in this position by plaster of Paris for a period of several weeks, and he had not been obliged to resort to extension subsequently. So far as he knew these cases had not relapsed.

DR. SHAFFER said that in a series of twenty-two cases of metatarsalgia, he had relieved over one half by the antero-posterior traction shoe alone. The inability to flex the ankle joint brought the maximum pressure at the point of irritation, and hence, by producing a certain amount of forcible flexion at the ankle joint, the pressure was brought upon other parts, thus removing the constant irritation which he thought was the chief etiological factor. He had permanently and completely relieved marked cases of non-deforming club foot within one week by three or four applications of his traction apparatus. In some cases, deformity can be reduced at one sitting, but the muscles re-contract slightly, necessitating a more prolonged treatment. He did not believe that tenotomy was necessary in any case of non-deforming club-foot.

DR. R. H. SAYRE had found many cases of metatarsalgia to be dependent upon irritation of the pelvic nerves, and such cases had been relieved by galvanism with one pole over the sacrum, and the other over the ovarian region. In the treatment of non-deforming club-foot, he sometimes employed stretching, and sometimes tenotomy, depending upon the nature of the case. If the tendo achillis or plantar fascia gave a reflex spasm when stretched to its utmost, while joint pressure was applied, his experience had been that tenotomy was necessary. If no reflex spasm was produced the contracted tissues could be stretched.

DR. RIDLON asked if the author considered the woman exhibited by Dr. Whitman to be a pure non-deforming club-foot, and whether he would expect to fully relieve the disability and restore the full flexion by the use of a stretching apparatus.

DR. HALSTED MYERS reported a case of non-deforming club foot in a man, thirty-eight years of age, in which the etiology was unknown. The symptoms were unusual in that although the ankle flexion was only stopped at 95°, the principal complaint was that the knee could not be fully extended. The patient also felt that he could not fully extend his thigh without much more effort than on the other side, and also felt that his pelvis was tilted up posteriorly. The man knew nothing of anatomy, yet these symptoms were reasonable theoretically, for shortened gastrocnemii might cause knee flexion, and this, in turn, thigh flexion, and this again, tilting of the pelvis up posteriorly. The shortening of the gastrocnemii was the only deformity apparent, yet the subjective symptoms were so annoying that the patient himself proposed forcible extension and fixation in bed, for months even, if necessary.

DR. H. W. BERG said that he had seen many of the cases on which Dr. Shaffer's first paper was based, and not a little credit was due to him for having distinguished these cases from those of chronic rheumatism. Most of those described in the paper of the evening had been so quickly relieved that he was inclined to think they were not congenital, for, after such a condition had lasted for many years, it did not seem reasonable that they should be relieved by one or two stretchings.

DR. HUBBARD, in closing the discussion, said that he had never seen a case of non-deforming club-foot which he thought would consent to an operation for the relief of the difficulty, as the patients did not ordinarily consider it of much importance. Nor could he recall a single case which had not been materially relieved after one or two stretchings, except in those which were rheumatic.

In answer to Dr. Ridlon, he would say that he considered the case presented by Dr. Whitman a typical one of non-deforming club-foot of a rather pronounced type; but he had seen as bad, and even worse, cases relieved by persistent stretching. The treatment was prolonged in some instances by the re-contraction of the muscles, but, just as India-rubber yields after a certain number of stretchings, so these cases will be permanently relieved after the continued use of the traction shoe. In the case referred to in the paper, the condition had lasted for a long time, and the muscle was well developed, and the time of treatment was still further prolonged by the patient's intolerance of the stretching.

A NEW APPARATUS FOR OVERCOMING THE ABDUCTION OF THE THIGH IN HIP JOINT DISEASE.

DR. NEWTON M. SHAFFER exhibited a new apparatus which he had devised for the purpose of overcoming the abduction of the thigh in hip-joint disease, and at the same time avoiding the infliction of any traumatism upon the joint. It consisted of a thoracic attachment to the ordinary long hip splint, with an arrangement of curved levers actuated by a key, by which motion is imparted to the limb in a direction downward and inward, instead of, as in other instruments of this class, inward and upward. This is the chief feature, and it is on this account that traumatism is avoided. It can be attached to an ordinary long traction splint, and, like the thoracic part, it is to be used only as a temporary arrangement for reducing the deformity.

DR. PHELPS said that he was glad to see that Dr. Shaffer had come to recognize the fact that we cannot act upon the hip joint with any degree of precision without taking hold of the thorax; but he failed to see any necessity for such an apparatus in our armamentarium, as his lateral traction splint did the same thing, and no case of hip-joint disease need recover with angular deformity. Since he had devised and made use of his lateral traction fixation splint, which acts on the same principle as the apparatus just exhibited, he had not seen a case in his practice of angular deformity. If such a thoracic splint be applied after the deformity has once been overcome, recovery must take place without angular deformity.

DR. SHAFFER explained that the apparatus he had just presented was intended only as a *temporary* apparatus for overcoming persistent abduction of the thigh, and he considered it a very serious mistake to use the thoracic attachment in the ordinary treatment of hip joint disease, because it limited the motion of the spinal column, and this would necessarily increase the strain upon the diseased joint. It was for this reason that he had discarded the thoracic addition to the hip splint many years ago. The idea of his new apparatus is to provide a temporary means of overcoming abduction, and it is only to be worn long enough to accomplish this purpose, and then it is so arranged that the abduction and thoractic portions can be readily removed, leaving the ordinary hip splint, which permitted a free movement of the dorso-lumbar spine, and thus diminished the traumatism at the hip, which is best shown when a patient with hip-joint disease and dorso-lumbar caries attempts locomotion.

CONVEYANCE OF IMMUNITY BY MILK.—Further investigations have now been made into the immunity, first discovered by Ehrlich, produced by suckling. The discoverer and Prof. Brieger have recently published an account of the results hitherto achieved in the *D. Med. Wochensch.*, 1892, as a contribution from the Institute for Infectious Krankh. The first object of this research was to determine the quantitative value of milk as regards immunity, in order to compare it directly with serum. The first experiments were made with tetanus. They immunized a goat in kid with great carefulness in the Brieger-Kitasato-Wassermann method, and after the goat had dropped its young four weeks, obtained a milk of great protective value. For more accurate investigation they injected 0.2 ccm. of the milk into a number of white mice, and determined the degree of resistance brought about by it. They found at the end of the sixth week of treatment that 0.2 ccm. of milk absolutely protected a mouse against a 16-fold lethal dose, whilst a 24-fold lethal dose caused serious illness, which, however, the animal recovered from. Further, 0.1 ccm. of milk was a protection when splinters of infected wood were inserted under the skin, but this result was not obtained with half the quantity of milk. A like favorable result was obtained when the milk was injected six hours after the insertion of the splinter of wood. The authors have since sought to procure the immunizing substance in a concentrated form, and have found that the whey contains the principle equally with the milk, and that by evaporation of the whey *in vacuo* its protective power is increased. Thus 0.2 ccm. of concentrated whey protected a mouse against a 48-fold lethal dose without any illness following. The authors lay stress on the high protective value of milk, and the ease with which large quantities of protective material can be procured as compared with blood serum. They also report that they have obtained similar results in regard to typhoid fever.

—*Med. Press.*

PROF. BROWN-SÉQUARD'S LIFE ELIXIR.—M. Brown-Séquard made a lengthy communication at the meeting of the Académie des Sciences on his life elixir, which, as is well known, is composed of a sterilized solution of the contents of the testicles of guinea-pigs, given in subcutaneous injections. He defended very warmly this treatment, and cited cases in which unusual vigor was imparted to the old and feeble. He went so far as to describe the benefit (in detail) he personally received, and the sensations he experienced. He also read a description of some cases forwarded to him by his *confrères*, who had tried the elixir on patients suffering from paralysis, anæmia, nervous prostration, etc., with good effect. M. Brown-Séquard was listened to with respectful attention, but whether the attitude of his colleagues was provoked by simply a sentiment of respect due to the venerable physiologist, or by the importance of the communication, it is not for me to say precisely, but I would incline to the former interpretation.

—*Med. Press.*

HEPATIC CYST.—At the Sociéte de Chirurgie, M. Schwartz related the case of a young girl, aged twenty-four years, who entered the hospital for an abdominal tumor, about the size of an infant's head, and situated in the hepatic region on the right side. Two months ago the patient first remarked the presence of the tumor, which was then but little less in volume than at the moment of examination; there was no pain, nor did the girl suffer any inconvenience from it. The tumor moved freely about when the muscles were relaxed, but became immobile under contraction. M. Schwartz thought he had before him a sarcoma of the abdominal wall; however, when he opened the abdomen he found a large cyst, with a pedicle about two inches long, hanging from the free edge of the liver. The tumor was easily removed, and the patient made a rapid convalescence.—*Med. Press.*

PARALYSES CONSECUTIVE TO INFECTIOUS DISEASES.—These paralyses are attributed—

1. To the direct action of the specific vein.
2. To a poison left in the organism by the disease, and acting after the malady is cured.
3. To some other poison acting simultaneously, or associated with the disease, but capable of communicating itself to other persons.

—*L'Union Med. de Canada.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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SUMMER RESORTS.

JUST now the burning question is: "Where shall we send our patients for the summer?" Individual preference will determine the question in many instances, but in many others it is one to de decided on the score of health. Especially is this the case during the present season, when our city is filled with survivors from *la grippe*, whose weakened frames still bear witness to the malefic force of that obstinate malady. It may safely be affirmed that never before has the question of the summer habitation been so anxiously discussed as at present, when the chances of malaria, of sultry nights and sweltering noons, and even the by no means unimportant question of mosquitoes, may weigh down the balance against the life of the invalid.

In the decision of this question there is one broad rule, with so few exceptions that it may be considered a general law. Sea air thins the blood, while mountain air enriches it. Plethoric individuals, fat people, uricemic, gouty, catarrhal, and scrofulous cases, should seek the sea-shore. Anemics, hemorrhagic, tubercular, and uremic cases should turn to the mountains. Heart cases are doubtful; mitral affections and most others being benefited by mountain air, while aortic cases are sometimes aggravated by it. Individual preference must be carefully followed, and as soon as an elevated climate seems to disagree, the patient should at once descend, and *vice versa*.

With one exception, the resorts described in the present number are in Pennsylvania. This State possesses a wealth of mineral springs, elevated tracts of mountain land, pine forests and limpid lakes, where the tired denizen of the city could find all his needs supplied, change of air, lovely scenery, the occupations of the summer idler, and this at a cost far below any accommodations he could obtain at the sea-shore. The vast majority of these are, however, utterly useless for this purpose, because they are unknown. The owners allow valuable properties in mineral springs to run to waste while they are getting in their hay. The country doctor will not write up his own neighborhood, but goes plodding along in his sedate way, while thousands of our people pour their wealth uselessly into the seaside hotels, who would find what they need in the hills, if they only knew.

This is an effort to direct some attention to the matter, by describing some of our own State's watering places. It would not be easy to select three more beautiful resorts than haughty old Bedford, the romantic Glen Summit, or the Neversink, whose charms the proximity of a city so large as Reading is not able to destroy. We regret that we could not include the other resorts—whether we will be able to do this in the future in a more comprehensive number, will depend on our readers, who must furnish the materials.

Annotations.

KUTZTOWN.

DR. J. L. PETERS says that the country about this town is healthy and very pretty. There are three hotels: the Black Horse, the Keystone, and the Washington. Rates, $4.00 to $5.00 per week. The cost of a round trip ticket is $3.26; the trains starting from Broad and Callowhill. Kutztown is easy of access and inexpensive; two very important points.

CRESSON SPRINGS.

ON the summit of the Allegheny Mountains, 2,300 feet above the sea-level, is situated Cresson Springs. This pleasant place has been endowed with rich and valuable natural advantages. The air is perfectly pure. The temperature, even in the severest heat of summer, maintains an even degree of refreshing coolness.

Malarious diseases are said to yield with readiness to the influence of this pure mountain air, and pulmonary affections are also benefited. Cresson is said to be free from malaria. The spring, on the hotel grounds, is claimed to be the highest pure water in the world.

Out-of-doors amusements there are lawn-tennis, cricket, base-ball, croquet, riding, and driving.

Music is furnished by the Cresson Orchestra; the dance, billiards, and ten-pins serve to lighten the hours. Rambles over the mountain are popular modes of diversion.

For riding and driving there is ample scope. A well-maintained livery, connected by telephone with the hotel, furnishes the means, and the beautiful and romantic drives, the way. From the hotel roads diverge in many directions. The forests of the mountain attain their highest grandeur in this vicinity, and the immensity of the trees is only exceeded by those of the famous big-tree district of California. Excursions by rail are also made over the Bell's Gap Railroad, famous for its high grades and grand scenery, to Johnstown, Altoona, South Fork, and Ebensburg. There is no place in the Alleghenies where so much of their grand scenery is obtainable as at Cresson.

WOPSONONOCK.

ABOUT eight miles from Altoona, on the Altoona, Clearfield and Northern Railway, is located the Hotel Wopsononock, on the mountain of the same name. It is regarded as the highest accessible point in the Allegheny Mountains, being 2,650 feet above the level of the sea, and 1,500 feet higher than the City of Altoona. The region was practically unknown to the outside world until two or three years ago, and there is still plenty of game in the vicinity, even deer and bear being found. Trout abound in the numberless small streams.

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THE CHEMICAL ACROBAT.—Even more regularity than the appearance of the fat woman, the ossified man and other freaks, the chemical acrobat is to be expected. He is more dangerous than the green goods man and more injurious to all concerned than the rogue whose operations come within the grasp of the law. Our trick chemist, either from pure cussedness or a desire to replenish his cash, selects a number of good and valuable articles and proceeds to "analyze" them. He then tabulates his alleged analysis, giving especial prominence to some one preparation which he places at the head of his list, and another which he places at the bottom; thus he has a double-barrelled gun, which may be marketable for either so-called legitimate advertising, or for a more sinister purpose. His deductions often upset our preconceived opinions, and cast a suspicion upon articles of food and medicine whose value has been proved by the experience of years. His misleading and injurious statements are under the cloak of honesty and the guise of science; he juggles with figures, and his tables, incorrect as they may be, are widely circulated and find many who credit them.

An apt illustration of this evil may be found in the *Medical and Surgical Reporter*, October 17, 1891, Vol. LXV, page 612, contained in an article by Dr. F. C. Herr, of Ottawa, Kansas, in which an anonymous chemist claims to have made analyses of nine varieties or brands of artificial foods.

I do not mention this especially in condemnation or approval of the articles mentioned, but as an example of the peculiar tactics of the chemical acrobat, who proves to his satisfaction that a newly-prepared food, called beef meal, is incomparable for nutritive excellence, and bovinine, beef peptonids and other staple articles are so inferior as to be entirely out of the race. In fact, if Dr. Herr was not able to present beef meal with this article, it is frightful to consider the many cases of starvation that would have occurred among those who have heretofore lived and grown fat upon, what have been considered to be, valuable and nutritive foods.

It is not my intention to enter into an extended criticism of these analyses, but will suggest that if they are incorrect or misleading in one instance, they may be in others. We will compare No. 1 (Mosquera's beef meal) with No. 8 (Bovinine), as giving the two extremes. The evident intention is to make the albumenoid quantity the standard of excellence of value. Reasoning in this line, our "chemist" compares a powder containing 8.81 per cent. of water with a liquid food containing 83.1 per cent. of water; by this means he argues that beef meal is valued at 78.12 albumenoid strength, while bovinine is esti-

mated as worth only 15.00. Suppose we now bring the two preparations to the same condition, remembering that the dry powder, beef meal, should be prepared for use by the addition of water, while bovinine has with it already the necessary water. Bringing them to the same standard, that is prepared for use, we then have:

	Moisture.	Albumenoids.	Other solids.
Beef meal.....	83.1	14.70	2.20
Bovinine.....	83.1	15.00	1.90

Or, we will exhaust the excess of water from the bovinine, bringing them in that manner to the same standard, we then have:

	Moisture.	Albumenoids.	Other solids.
Beef meal.....	8.81	78.12	13.07
Bovinine.....	8.81	86.76	4.43

But again Professor Chittendon has shown in a recent analysis (published in Proceedings of Philadelphia County Medical Society, Vol. XII, p. 130) that the albumenoid portion of beef meal is ⅓ soluble and ⅔ insoluble.

Bovinine being known to be in perfect solution and ready for assimilation would show the following contrast, comparing the dose of each and their food value in albumen:

	Dose.	Total albumen.	Soluble albumen (food value).
Bovinine..	4 drachms.	36 grains.	36 grains.
Beef meal.	1 drachm.	46.87 "	15.62 "

It is extremely doubtful if the anonymous chemist referred to by Dr. Herr has made a correct analysis, the composition of bovinine being such that, according to the statement of the manufacturers, it would be impossible to produce a preparation limited to 15 per cent. of proteids. The following is stated to be the true formula for the preparation of bovinine (see THE TIMES AND REGISTER, January 16, 1892, Vol. XXIV, No. 3, page 56).

Bovinine contains:

Defibrinated bullock's blood	65.00
Desiccated egg albumen	19.00
Old Bourbon whiskey	10.00
Chemically-pure glycerine	5.00
Chemically-pure boric acid	1.00
	100.00

It only requires a glance at this table to show the incompetency of a chemist who analyzes a product which is confessedly 65.00 defibrinated blood and 19.00 desiccated albumen, and finds exactly 15.00 of albumen.

It would be impossible to produce such a food containing less than 25 per cent. of proteids; moreover, the same article in THE TIMES AND REGISTER, before referred to, states that an analysis of bovinine shows it to contain nitrogenous extractives, soluble, amounting to 45 per cent. Bearing in mind that the previous comparisons are made upon the assumption that bovinine contains but 15 per cent. of proteids, how absurd would be the deductions from Dr. Herr's article if, instead of 15 per cent., we were to substitute 45 per cent.

In conclusion, I would say that it would seem that some legislation tending to protect honest industry from the attacks of these anonymous and irresponsible mathematical jugglers, would be entirely in order.

—*Jour. Am. Med. Assoc.*

INEBRIETY NOTES.

By S. V. CLEVENGER, M.D.

I was much impressed with the value of Dr. Clouston's suggestion that cravings were often misinterpreted, and while alcohol may seem to have been what was needed, some physiological want really existed which might have been satisfied by some other means than drinking. I know a patient in point, who often hurries to the nearest restaurant and eats heartily of anything to appease an appetite that all too often he had ministered to with alcoholics, and he usually finds this expedient successful, but the food repletion makes him uncomfortable and somewhat melancholy.

The relations of alcoholics and foods in general are worth deep consideration, and such a study would well repay the physiological chemist who would not only experiment, but read up what little literature exists on the subject and then think over the entire matter. As far as I have been enabled and had time to investigate, I am convinced that just as no two persons are affected exactly alike by the same kind of potations, so we will have to group susceptibilities into less general classes, sub-classes, and varieties, and that the matter of food substitution for drinking will have to be individualized very largely.

The spread of a bar room free lunch has its significance. Concentrated nitrogenous food, such as cheese and roast meats prevail, apparently to supply elements complementary to the hydrocarbon liquids, and we find inebriates who live mainly upon cheese and meats while drinking, with an aversion for vegetables and fruits, especially apples. One dipsomaniac I recall knows that he is recovering when he begins to dislike cheese, and takes meats sparingly, and grows fonder of vegetables, especially peas. Liebig, many years ago, claimed that the proper diet for a drunkard during abstinence should be leguminous, as this met, to some extent, the desire for hydrocarbonaceous diet that had previously been taken in the more concentrated form.

In "Physiological Memoirs," by Wm. A. Hammond, 1863, a chapter records the results of experiments with alcohol and tobacco upon the human system; and however much the doctor's conclusions may agree or disagree with those of earlier or later investigators, they are well worth citing as being the result of painstaking and conscientious inquiry. He claimed that "alcohol increases the weight of the body by retarding the metamorphosis of the old tissues, promoting the formation of new, and limiting the consumption of the fat." "The use of alcohol," he therefore states, "even in moderation, cannot be either exclusively approved or condemned. The laboring man who can hardly procure bread and meat enough to preserve the balance between the formation and decay of his tissues, finds here an agent which, within the limits of health, enables him to dispense with a certain quantity of food, and yet keeps up the strength and weight of his body. On the other hand, he who uses alcohol when his food is more than sufficient to supply the waste of tissues, and at the same time does not increase the amount of his physical exercise, or drinks an additional quantity of water, by which the decay of tissue would be accelerated, retards the metamorphosis while an increased amount of nutriment is being assimilated, and thus adds to the plethoric condition of the system which excessive food so generally induces."

No cast-iron rule, therefore, can be applied alike to the "wealthy inebriate" and the "drunken laborer"

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An apt illustration of this evil may be found in the *Medical and Surgical Reporter*, October 17, 1891, Vol. LXV, page 612, contained in an article by Dr. F. C. Herr, of Ottawa, Kansas, in which an anonymous chemist claims to have made analyses of nine varieties or brands of artificial foods.

I do not mention this especially in condemnation or approval of the articles mentioned, but as an example of the peculiar tactics of the chemical acrobat, who proves to his satisfaction that a newly-prepared food, called beef meal, is incomparable for nutritive excellence, and bovinine, beef peptonids and other staple articles are so inferior as to be entirely out of the race. In fact, if Dr. Herr was not able to present beef meal with this article, it is frightful to consider the many cases of starvation that would have occurred among those who have heretofore lived and grown fat upon, what have been considered to be, valuable and nutritive foods.

It is not my intention to enter into an extended criticism of these analyses, but will suggest that if they are incorrect or misleading in one instance, they may be in others. We will compare No. 1 (Mosquera's beef meal) with No. 8 (Bovinine), as giving the two extremes. The evident intention is to make the albumenoid quantity the standard of excellence of value. Reasoning in this line, our "chemist" compares a powder containing 8.81 per cent. of water with a liquid food containing 83.1 per cent. of water; by this means he argues that beef meal is valued at 78.12 albumenoid strength, while bovinine is esti-

mated as worth only 15.00. Suppose we now bring the two preparations to the same condition, remembering that the dry powder, beef meal, should be prepared for use by the addition of water, while bovinine has with it already the necessary water. Bringing them to the same standard, that is prepared for use, we then have:

	Moisture.	Albumenoids.	Other solids.
Beef meal.....	83.1	14.70	2.20
Bovinine.....	83.1	15.00	1.90

Or, we will exhaust the excess of water from the bovinine, bringing them in that manner to the same standard, we then have:

	Moisture.	Albumenoids.	Other solids.
Beef meal.....	8.81	78.12	13.07
Bovinine.....	8.81	86.76	4.43

But again Professor Chittendon has shown in a recent analysis (published in Proceedings of Philadelphia County Medical Society, Vol. XII, p. 130) that the albumenoid portion of beef meal is ⅓ soluble and ⅔ insoluble.

Bovinine being known to be in perfect solution and ready for assimilation would show the following contrast, comparing the dose of each and their food value in albumen:

	Dose.	Total albumen.	Soluble albumen (food value).
Bovinine..	4 drachms.	36 grains.	36 grains.
Beef meal.	1 drachm.	46.87 "	15.62 "

It is extremely doubtful if the anonymous chemist referred to by Dr. Herr has made a correct analysis, the composition of bovinine being such that, according to the statement of the manufacturers, it would be impossible to produce a preparation limited to 15 per cent. of proteids. The following is stated to be the true formula for the preparation of bovinine (see THE TIMES AND REGISTER, January 16, 1892, Vol. XXIV, No. 3, page 56).

Bovinine contains:

Defibrinated bullock's blood.....	65.00
Desiccated egg albumen.....	19.00
Old Bourbon whiskey.....	10.00
Chemically-pure glycerine.....	5.00
Chemically-pure boric acid.....	1.00
	100.00

It only requires a glance at this table to show the incompetency of a chemist who analyzes a product which is confessedly 65.00 defibrinated blood and 19.00 desiccated albumen, and finds exactly 15.00 of albumen.

It would be impossible to produce such a food containing less than 25 per cent. of proteids; moreover, the same article in THE TIMES AND REGISTER, before referred to, states that an analysis of bovinine shows it to contain nitrogenous extractives, soluble, amounting to 45 per cent. Bearing in mind that the previous comparisons are made upon the assumption that bovinine contains but 15 per cent. of proteids, how absurd would be the deductions from Dr. Herr's article if, instead of 15 per cent., we were to substitute 45 per cent.

In conclusion, I would say that it would seem that some legislation tending to protect honest industry from the attacks of these anonymous and irresponsible mathematical jugglers, would be entirely in order.

—*Jour. Am. Med. Assoc.*

INEBRIETY NOTES.

By S. V. CLEVENGER, M.D.

I was much impressed with the value of Dr. Clouston's suggestion that cravings were often misinterpreted, and while alcohol may seem to have been what was needed, some physiological want really existed which might have been satisfied by some other means than drinking. I know a patient in point, who often hurries to the nearest restaurant and eats heartily of anything to appease an appetite that all too often he had ministered to with alcoholics, and he usually finds this expedient successful, but the food repletion makes him uncomfortable and somewhat melancholy.

The relations of alcoholics and foods in general are worth deep consideration, and such a study would well repay the physiological chemist who would not only experiment, but read up what little literature exists on the subject and then think over the entire matter. As far as I have been enabled and had time to investigate, I am convinced that just as no two persons are affected exactly alike by the same kind of potations, so we will have to group susceptibilities into less general classes, sub-classes, and varieties, and that the matter of food substitution for drinking will have to be individualized very largely.

The spread of a bar room free lunch has its significance. Concentrated nitrogenous food, such as cheese and roast meats prevail, apparently to supply elements complementary to the hydrocarbon liquids, and we find inebriates who live mainly upon cheese and meats while drinking, with an aversion for vegetables and fruits, especially apples. One dipsomaniac I recall knows that he is recovering when he begins to dislike cheese, and takes meats sparingly, and grows fonder of vegetables, especially peas. Liebig, many years ago, claimed that the proper diet for a drunkard during abstinence should be leguminous, as this met, to some extent, the desire for hydrocarbonaceous diet that had previously been taken in the more concentrated form.

In "Physiological Memoirs," by Wm. A. Hammond, 1863, a chapter records the results of experiments with alcohol and tobacco upon the human system; and however much the doctor's conclusions may agree or disagree with those of earlier or later investigators, they are well worth citing as being the result of painstaking and conscientious inquiry. He claimed that "alcohol increases the weight of the body by retarding the metamorphosis of the old tissues, promoting the formation of new, and limiting the consumption of the fat." "The use of alcohol," he therefore states, "even in moderation, cannot be either exclusively approved or condemned. The laboring man who can hardly procure bread and meat enough to preserve the balance between the formation and decay of his tissues, finds here an agent which, within the limits of health, enables him to dispense with a certain quantity of food, and yet keeps up the strength and weight of his body. On the other hand, he who uses alcohol when his food is more than sufficient to supply the waste of tissues, and at the same time does not increase the amount of his physical exercise, or drinks an additional quantity of water, by which the decay of tissue would be accelerated, retards the metamorphosis while an increased amount of nutriment is being assimilated, and thus adds to the plethoric condition of the system which excessive food so generally induces."

No cast-iron rule, therefore, can be applied alike to the "wealthy inebriate" and the "drunken laborer"

for their reformation, than would be applicable to the treatment of surfeit and starvation. Furthermore, the matter is one that does not concern alcohol ingestion alone, but there must be considered a multitude of toxic ingredients in most drinks, such as logwood, anilines, salicylic acid, sulphate of copper, fusil oil, tannic acid, ethers, and essential oils of many kinds. In fact, average intoxication has ceased to be a simple matter, for there is no guessing what chemical combinations the indiscriminating tippler may have experimented with.

From mistaken motives of expediency, the enemies of alcoholic debauchery have persistently refused to admit that there was any good in alcohol at all, forgetting, ignoring, or ignorant of the fact that there can be no greater harm done to a good cause than through adopting immoral means to foster it. Alcohol has its uses in the world, though its abuses may outnumber them. It may be a "medicine in sickness and a poison in health," its usefulness in debilitated conditions arising from age or illnesses, and its marked sustaining powers must not be ignored if we are to arrive at a true understanding of what it does in the economy, why it does it, and above all, why there is such universal addiction.

From the evolutionary standpoint the intestinal tract and associated organs have been built up by degrees from the simple gastrulated pouch-like condition to be found in many low invertebrates, and in every animal hydrocarbonaceous substances are more or less perfectly converted into assimilable food for the general tissues. The colonies of cells comprising the organism are adjusted to definite repetitions of feedings; the enteric cells taking some sustenance from the crude materials, the lacteals, hepatic, cerebral, renal colonies, in their turn, feasting upon the peculiar pabulum passed on to them, according to their positions in the economy, their chemical affinities and structures, and their opportunities for supply.

The highly elaborated alimentary apparatus of mammalia has, doubtless, through millions of years of inherited structure adaptations, finally become adjusted to food containing more or less *debris* or innutritious materials, from which it is the united function of the various organs to separate that which nourishes the organism. In other words, the stomach, intestines, liver, blood-vessels, etc., have to work, to labor, to pick over, treasure up this, and cast out that; and the entire individual is built up to this necessity, and effete matter has become just as much of a necessity mixed with food proper as is gravel in the digestive apparatus of the chicken. Concentrated "rich" diet, of any kind whatsoever, may at times fulfill a useful purpose, when the general strength is at fault and there is need for instant repair; but when this is long-continued the system revolts and announces that nourishment too easily obtained, and by throwing certain organs out of employment, must be paid for in some other way.

Alcohol is not only a food, but a highly concentrated food, and therein lies the explanation of universal addiction and its danger. Could the cells of the organism speak, we might hear a hurrah from the stomach and small intestines in which the adjacent blood-vessels would join over the alcoholic feast which has not been earned by work. The nervous system, with its special affinity for this food, joins in the excitement of having thrust upon it what before it obtained with more difficulty, but calmly and regularly. Part of nature is on a holiday, but structures less favorably situated with regard to the orgie are sullen and finally clamorous; the liver and kidneys and excretory organs generally are off duty, or through many repetitions of the riot conclude to work as little as possible. The surfeited colonies begin to suffer from repletion. Hyperplasiæ, congestions, crazy physiological processes, blocked avenues, some parts engorged and others starved follow, and things in general try to adjust to the revolutionized condition, the liver and kidneys shut up shop, and the brain takes a vacation. Were it possible to easily adapt the animal parts to concentrated chemical food, nothing of this would occur, but that nature does make a sincere attempt to habituate the race to a less harmful assimilation of alcohol, I think there is reason to believe.

A few centuries ago there was most universal drunkenness, pervading all ranks, castes and degrees. That public opinion has suppressed much of a continuance of this, there can be no doubt; but something of the lessened exhibition of alcoholism is doubtless due to transmitted adaptation. Savages are readily upset by small quantities of liquor, and practice enables many individuals to increase the quantity taken before the same effect is produced. So, just as races may be immune from certain epidemics, the descendants of drinkers may not only indulge more freely than their ancestors, but indulgence may become a necessity to the proper working of their (individual) physiological make-up. We are familiar with the common theory that drunkards may beget degenerate offspring, but it is not recorded that a physical degeneracy thus entailed may be compensated for by liquor ingestion. Here is a case in point: A talented young fellow was harrassed by anæmia, hepatic and intestinal difficulties, insomnia and the knowledge that the origin of all his ailments was in his father's excesses. He dreaded alcoholics and for long years determinedly abstained, for which he deserved all the more credit, as he knew that drink was what he needed. He finally yielded in despair, concluding that it made little difference whether he died from drinking or the want of it, and, presto, away went all his ailments. He is now thirty years old, does not get drunk, but takes whiskey in a fixed quantity as a food. The future will determine the issue, but I believe that he may live to old age and preserve the equilibrium he has thus established, particularly as good heredity antedates his paternity, and by "reversion" his offspring may be free from such trouble. The temperance ranter would never admit the possibility of this; but, if we are to get at the truth of any complicated question, there must be no skulking from facts, and, so far from their being danger in admitting the possibility of such an instance, we may be throwing light on the study, obtainable in no other way. A useful analogy may be cited to explain some physical features of alcoholic degradation, and analogies have a far deeper significance than is generally supposed; for, as Herbert Spencer points out, many natural laws that apply to nations are directly derivable from those that govern the individual components, and, I still further hold, that the man is what is constituted by his component cells, no better, no worse, and identically, in the aggregate, as they are.

Just as the Chinese suppose the mind resides in the abdomen, so average mankind thinks that Congresses, Parliaments, Presidents, Kings are the brains of nations. For present purposes we may draw comparisons between parts of the individual and corporate organisms, as follows; nor does it matter that we mix up mechanism and men, the organic and inorganic, for the skeleton is as useful as more highly organized parts:

Merchants, bankers, etc. are the nation's intestinal organ cells; and that they don't eat up everything that passes into their custody, is solely due to their not being able to do so.

Common carriers are the blood-vessels.

Telegraphs, and other such means of communication, constitute the nervous system.

Laborers, soldiers are the muscle cells.

So-called rulers and law-makers (whether in republic or monarchy), merely obtain their power from the general units, and serve to correlate the intestinal and vascular operations, as the sympathetic system does.

The professors, authors and real thinkers generally are the recognized brains of communities, however starved and neglected; and, as individuals are usually guided emotionally and think afterward, so the real brains of a community are disregarded in the main. I can hear the usual comment upon this indirect method of approaching a subject, What relevancy has this?

Well, it has every relevancy, identity of import, in fact, but Spencer is the best exponent of this and has sufficiently defended this method of reasoning. Pathological conditions infest communities as well as individuals, from want of harmonious working of parts.

When the elaborating, transferring apparatus of a person or nation, as the intestines and blood-vessels, or merchants and railways, either separately or together, become too hoggish, and want to absorb everything, it is an easy matter to induce the intestinal ganglia legislature to adjust means for so doing; but, as this means death to the organism in general, a feverish condition may follow that threatens the national life until an equilibrium is restored. The intestines are often traitors to the commonwealth, but so may be other associated parts.

Merchants, the marine and railways, discover a short cut to fortune and forsake established methods. "Confound the brain!" says the duodenum. "Blast the bloody liver!" says the stomach; "it will have to take what I see fit to let it have—my wants are first." Debility, if not worse, follows, as a matter of course, in which the greedy enteron shares, and the "bloated bond-holder" realizes that he is merely a constipated colon, and prays for a diarrhœa to put him in healthy relationship with his neighbors.

Without carrying analogies too far, I meant to illustrate, in a homely way, why there should be such a psychic and physical revolution wrought in the alcoholic, and in a few words the matter can be summed up thus: Millions of years have been occupied in building up the brain and body to its present fairly harmonious working together, and much, if not most, of this is an adjustment to the necessity of work on the part of such organs as we possess; and when one part by isolation seeks to take all in its way, we have cancers, tumors, inflammation, etc., with not only danger to remote parts, but threatened destruction of the too selfish tissue itself. Gastritis, gastro-enteritis would be fortunate warnings to the alcoholist, just as were the effects of some rabid tariff increase to fall first upon the instigators; but, unfortunately, the brain may be degraded before the stomach feels the effects so much.

It is precisely this wonted, inherited, built-up harmony between the organs is destroyed by potations, by the too dangerous food, by the too ready and rapid assimilability of alcohol, that the tissues turn traitor to one another. Accompanying other physiological processes, those of the mind are gradually erected, and the latest acquired are the first to decay, from any cause, such as senility, etc.

The short cut afforded to nutrition by alcohol shuts off further attainment intellectually (I speak of extreme cases); the natural affections are perverted, the higher sensibilities are blunted, heartlessness, savagery, viciousness, lowered will power and sentiments, follow, as matters of course.

Men and nations must remember that "eternal vigilance is the price of liberty," and that knowledge, increase and dissemination are the greatest foes to vice and disease, which are often, if not always, one and the same thing, whether afflicting the person or the people.—From *Journal of Inebriety*.

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THERAPEUTIC NOTES.

(E. W. BING, M.D., CHESTER, PA., TRANSLATOR).

THE Bordeaux *Journal of Medicine* notes a case of fracture of the anterior wall of the auditory canal and luxation backwards of the lower jaw, with penetration of the condyles into the ears. The accident occurred to a fireman on a steamer. A sudden, heavy sea threw him on a heap of coal. He fell in such a way that his chin came in violent contact with a block of the coal, making, a little to the left of the median line, a contused wound, about one and a half inches long. He felt a sharp pain in both ears, especially the left. There was no hemorrhage, but the hearing was absolutely abolished when he kept his mouth closed. Movement of the jaw was painful and difficult.

On examination at the hospital, there was seen a slight retraction of the lower jaw, the incisors being somewhat in retreat of those of the upper jaw. The lower molars were wanting, and this is a powerful predisposing cause in backward luxation of the jaw (Baudrimont). The auditory canals were flattened, from before, backwards, the anterior wall being almost in contact with the posterior; the canal on the left side was narrower than on the right. There was no crepitation felt. There was a slight serous flow from both ears, but the membrana tympani seemed to be intact. Under treatment by gum-elastic bougies, the hearing, which was very weak, seemed to improve from day to day.

THE SALTS OF STRONTIUM (*Revue Medicale*).—Latterly the attention of the medical profession has been drawn to the services which the hitherto neglected salts of strontium may yield to therapeutics. Laborde, who has particularly studied their effects on man and animals, draws the following conclusions:

Contrary to the general opinion, suggested by the analogy of these salts to those of barium, the salts of strontium are entirely devoid of poisonous effect, provided that they are absolutely pure. With this proviso, they may be given in relatively large doses, not only without ill effects, but, on the contrary, with beneficial results to the general nutrition. The strontium salts appear to exert a conservative and antiseptic action on the solids, fluids and excreta. Their elimination by the bowels is incompatible with the existence of tænia, which indicates a parasiticidal power in conjunction with their other actions. They present advantages over the potassium salts in being well tolerated even for an extended period. The bromide of strontium is thus better adapted for use in epilepsy than the potassium salt, also in heart troubles iodide of strontium is preferable. They are also very satisfactory in gastric troubles; but the action of the lactate, bromide or nitrate of strontium in Bright's disease is most remarkable. All experimenters have

shown, that the proportion of albumen is diminished by one-half often in twenty-four hours, but is scarcely possible, even after long use of the remedy to bring the amount to zero.

The cases of albuminuria, which yield most readily to strontium, are the albuminuria of pregnancy, of rheumatic or gouty nephritis, of cachexias; at the approach of uræmia, unfortunately, the albumen tends to reappear, if the drug is suspended. A satisfactory explanation of this action of strontium on the excretion of albumen has not been found. The observations of Vulpian, showing the happy effect of the nitrate in chronic rheumatism with painful swelling of the articulations, opens a new field for its employment. It is a *sine qua non*, that the salts be absolutely pure and not contaminated with barium, whose poisonous action is so marked. The drug may be administered in solution in water (distilled), in simple syrup, or in syrup of orange peel.

The lactate and nitrate can be given in daily amounts of 15 to 20 grammes, in single doses of 3 grammes at a time (usually 3 grammes in solution, morning and night, are prescribed).

The bromide and iodide are given in daily amounts of 2 to 4 grammes in 1 gramme doses.

As a tæniacide:

R.—Lactate of strontium..... 20 grm.
Distilled water.....120 "
Glycerine..... 95 "

Sig. For 4 days, a dessertspoonful in the morning. Usually at the expiration of this time, one can feel assured that the patient is rid of the tænia.

CONTRIBUTION TO THE STUDY OF AURICULAR COUGH (Ceruminicious pellets having given rise to a false diagnosis of pulmonary tuberculosis—*Goureau*).—Cough is due, according to the teachings of physiology, to an irritation of the pneumogastric. It may thus be produced by numerous extra-thoracic causes. Amongst these causes, lesions of the auditory canal often escape notice. The nerve of Arnold here plays an important rôle. Springing from the superior ganglion of the pneumogastric, this sensitive thread stretches on the outside, across the aqueduct of Fallopius and crosses the trunk of the seventh pair at the level of the origin of the chorda tympani. After having furnished to the facial a small anastomotic branch, it continues in the thickness of the mastoid portion, and it there divides into three branches, of which two go to terminate in the integument of the superior wall of the external canal, and the third supplies the membrane of the tympanum. Irritation of any one of these branches can cause cough. The author (Goureau) mentions a case of a patient who consulted him for anilateral deafness. This man constantly coughing, with emaciation and fever, had been treated for some months for pulmonary tuberculosis and, indeed, presented the appearance of that affection. He (Goureau) found, however, no pulmonary lesion, on the closest examination. Examining the ear, he found a large and very hard accumulation of wax which, if touched, caused violent paroxysms of coughing. On removal of the wax, the phthisical (?) patient rapidly recovered.—From *Revue de Laryngologie, Otologie, etc.*

INFECTION OF THE URINARY PASSAGES (Dr. J. Denis).—Setting aside rare exceptions, there remain four infectious agents concerned in diseases of the urinary apparatus:

The bacillus of tuberculosis.
The staphylococcus pyogenes.
The streptococcus pyogenes.
The bacillus aerogenes.

The first three microbes are already well known. They are capable of increasing rapidly in all the tissues, so that it is not strange to find them in inflammations of the urinary organs.

The bacillus aerogenes is more restricted in its distribution. Described by Escherich, for the first time, in his researches on the microbes of the intestinal tube, it received from him the name of bacillus lactis aerogenes. It is found in an almost pure state in the stools of children nursed at the breast, and of persons subjected to a milk diet. One of its properties is that of causing the fermentation of glucose, with disengagement of carbonic acid and hydrogen; for this reason it received the affix "aerogenes." Its importance in urinary infection was established by Abarrau and Hallé, but these authors did not identify it with the bacillus of the stools; they made it a separate species, to which they gave the name of bacterium pyogenes. It remained for M. Morelle to establish the absolute identity of the two. Thus we see a "host," normal to the intestinal tube, at a certain period of life capable of becoming a pathogenic agent. The researches of the above writers, and those of Denys, demonstrate the important rôle played by the bacillus aerogenes in cystitis. The greater number, perhaps two-thirds of the cases of this affection, are caused by the presence of this microbe either alone or associated with others.

The bacillus aerogenes is an organism which is very widely distributed around us. It appears constantly in the stools of the new-born, as soon as the meconium is expelled; and for a microbe to show itself so regularly in the first stools under a milk diet, it must be, so to speak, ubiquitous. Further, this microbe appears to be identical with the bacillus lactis, the organism which causes the fermentation of milk.

The lactic ferment (bacillus aerogenes) not only causes cystitis, but also other affections of the urinary apparatus, as pyelitis, nephritis, perinephritis. A microbe can only be considered pathogenic when its cultures reproduce the disease in animals. The bacillus in question has undergone this test. Albarrau and Hallé have observed its effects in different animals. By its injection into the bladder they have produced all the lesions of cystitis, even to ulceration of the mucous membrane. By injection into the ureter, in the direction of the kidney, they have obtained suppurating pyelitis with dilatation, and suppurating nephritis with, or without, miliary abscess. Inoculation of the subcutaneous cellular tissue usually caused a local abscess, complicated in some cases with general infection, followed by death. The occurrence of this bacillus in the urinary organs cannot, then, be considered as of secondary importance.

The germs named above may gain admittance to the system by three ways:

1. By the blood;
2. From neighboring organs; for example, from abscess opening into the pelvis of the kidney, or into the bladder;
3. By the orifice of the urethra.

The usual gate of entry is by the meatus, and nine-tenths of the infections of this system occur in this way. It is well known that the ordinary agent of this contamination is the sound or catheter. Hence, only sterilized instruments should be employed, but even then, one is not sure of preventing infection. The micro-organisms which are found on the clothing, under the prepuce, on the glans, in the meatus, even in the urethra itself, must all be reckoned with.

Bouchard found, some years ago, under the prepuce, a bacillus capable of development in the urine, which has since been recognized as identical with the bacillus aerogenes. Others have found, in the urethra, the staphylo- and streptococcus pyogenes. Morelle had occasion to make some interesting observations in cases of incontinence of urine. He made cultures with the urine which soiled the linen of the patient, and obtained in one case the bacillus aerogenes in a pure state, and in the other, associated with a second organism. In the first of these cases, he made, besides, cultures with the thick liquid which remained inside the meatus, and obtained the bacillus mixed with the staphylococcus pyogenes aurens. These facts show that these two organisms vegetate abundantly, both on the clothing and in the urethral canal. Of what use in these cases, is a sterilized instrument? Evidently, of no use. By touching the clothing, in penetrating into the urethra, the instrument carries the organisms before it, pushes them into the bladder, and produces vesical inflammation. More than one physician has witnessed cases like the following: A person, suffering for some time with weakness of the bladder—with incomplete retention—(incontinence) of urine, is sounded. Till now, the urine had been clear. The physician uses a disinfected sound, but takes no account of the decompositions which go on under the prepuce and in the meatus; he neglects to disinfect the glans, to practice antiseptic injections, and the consequence of his operation is a case of cystitis. Fortunately, every introduction of germs is not sufficient to produce infection, since they must meet with a suitable soil in order to their development. While in some cases, sounding may be performed with impunity, and for some time, in others the first introduction of an instrument may be the point of departure of an incurable cystitis, which may even cause death in a few days. The reason for this wide difference is to be found in the condition of the urinary apparatus. If healthy, no harm is usually done; but, if the bladder is weakened, or unable to be completely evacuated, or if it contains a calculus, the accident is always to be feared. A diseased apparatus has a much greater receptivity for germs than a healthy one. We do not fully know why it should be so, but it is probable that the inherent function of the healthy bladder, constitutes a powerful means of auto-disinfection, through its expulsive power; but, where there is incomplete expulsion of the contents, a fertile soil is furnished for the multiplication of the germs. Retention of urine, although a decided cause of infection, is far from furnishing the complete solution of the difficulty. Many points remain to be cleared up, amongst them the migration, at a given moment, of the organisms into the ureters and kidneys, with resulting pyelitis and nephritis, is neither the least interesting, nor the least obscure.

The diagnosis, between the four varieties of genus mentioned in the beginning of the paper, is based on the following points:

The bacillus of tuberculosis, contrary to the other three, scarcely ever develops in the urine; it multiplies in the tissues. It is only when these become inimical that it passes into the urine, to be carried outside the body with the excretory matter in which it is found; but, without undergoing multiplication.

The bacillus is so rare that it may almost be said to be never seen; in a suspected case, long and careful search with the microscope is necessary to find the germ. The others, on the contrary, live and increase in the urine. When they have produced inflammation, are to be found by the hundred in each field of the microscope. The bacillus aerogenes forms cylinders of variable length and size—isolated or by twos or in filaments composed of a greater or less number of individuals placed end to end. The streptococcus and staphylococcus pyogenes show themselves as micrococci; that is to say, of a rounded shape. They are arranged differently. The former occurs in more or less tortuous chains; the latter in irregular masses. As cystitis may be produced by two, or even three, of these germs, the microscope enters largely into the diagnosis.

FORMULARY.—*For chapped hands, etc.*

℞.—Potass. (caust.)..... 0.5 grms.
Glycerine,
Alcohol.....āā 20 grms.
Distilled water..... 60 grms.

After bathing the hands in hot water, rub with this mixture once a day. Cure in two or three days.
—*Nouveaux Remedies.*

For cold in the head.—Extract gelsemium (fluid) in 10 drop dose, taken at bedtime, cuts the affection short. Ordinarily a single dose is sufficient.
—*Le Scalpel.*

LOCAL ANÆSTHESIA BY HYDROCHLORATE OF COCAINE, IN OBSTETRICS.—To alleviate the pains of childbirth, Frank has for some time used with success cocaine. When the dilatation of the neck is commencing, he commences to apply to the neck, the inferior segament and the cul de sac of the vagina, a tampon of absorbent cotton, wet with a 5 per cent. solution of cocaine. These applications should be repeated every one half hour or hour. Dilatation being complete, the applications are continued on the vaginal wall. When the head reaches the perineum, a solution of 1 or 2 per cent. may be used. If operative measures are necessary, chloroform should be used in addition.—*Jour. de Med. de Paris.*

TREATMENT OF GRANULAR CONJUNCTIVITIS.—Dr. Perreti, of Algeria, recommends the following, which he has used successfully for five years in this disease:

Every night to apply to the edges of the lids red precipitate ointment, using a piece of the size of a grain of wheat, and on the following morning to put 4 or 5 drops of a solution of equal parts of Goulard extract and water into the eyes, and then to wash them with salt water. The next day to dust, with a camel's-hair brush, this powder, calomel, powd. orris, tannin, equal parts, a little into each eye. The liquid collyrium and the powder are to be used on alternate days. If the granulations are old, hard and fleshy, it is well to scarify. The treatment never lasts over two months.—*Revue d' Opthalmologie.*

DUODECIMAL DOSAGE FOR POISONOUS DRUGS (*Frouette*).—It being difficult at present for the physician to prescribe limited therapeutic doses of poisonous drugs, on account of the periods between the doses being brief and dangerous, the method of Frouette is recommended as avoiding these dangers.

It consists in the fractional division of the maximum dose which can be given to an adult in twenty-four hours. Whatever may be the toxic effect of a drug, the maximum dose will be exactly divided into twelve parts, either in the form of pills, cachets, granules, or capsules, and the physician has only to remember that twelve doses constitute the maximum amount to be given.—*L' Union Med. de Canada.*

A Case of Primary Tuberculosis of the Conjunctiva, Followed by Death from Pulmonary Phthisis (*Motais*).—Child, eight years old, with following symptoms: Upper eyelid of left eye much inflamed and of a violet shade. Conjunctiva slightly injected, no secretion. On turning the lid outward, there was found granulations of a color varying from rose to gray, some of which were semi transparent. These closely set granulations formed very apparent rounded projections. Two eroded, non-secreting surfaces, with a shallow, grayish bottom, looking like indurated chancres, existed at the center and near the external angle. The lower eyelid was quite healthy, as was also the ocular conjunctiva, except for the slight injection already noted. The ophthalmoscope showed nothing—vision normal. The pre-auricular ganglion could be clearly felt.

According to the mother, the symptoms commenced two months previously, and the development was gradual. In other respects the child had ordinary health, and had had none of the usual children's diseases. The differential diagnosis involved three affections:

1. Trachoma;
2. Special conjunctivitis, recently described by Parinaud and attributed by him to animal contagion;
3. Miliary tuberculosis.

To clear this up, the author had recourse to inoculation. A fragment of the mucous membrane was inoculated into the left eyes of two rabbits; on the fifteenth to the twenty-third day, lumpy and dark-colored swellings appeared—the subjects rapidly became emaciated. The examinations proved both the ocular tumors and the viscera to be crowded with Koch's bacillus. The progress of the disease confirmed the laboratory diagnosis. In the meanwhile, the patient, left the town (Angers). One of his parents told me afterwards that he had died at Paris in December, of phthisis. They had besides remarked during the last period, a notable enlargement of all the cervical ganglions on the left side.

—*Soc. d'Opthal. de Paris.*

Presence of Bacilli of Tuberculosis in the Seminal Fluid (*Fox*).—At the autopsy of a man, affected with tuberculosis of the pharynx, larynx, lungs, and intestines, there was found, besides a voluminous tumor of the spleen, probably developed from absorption of toxic material and due to a deposit of cellular structure. The kidneys, of normal size, presented small nodules of tubercle disseminated in the cortical portion. The bladder was healthy. The prostate was of normal size; a small caseous, but not softened deposit was found in the right lobe. The testicles, epididymis, deferent canal and seminal vesicles appeared quite normal. From the incised vesicles flowed a milky fluid, very rich in spermatozoa. A preparation of this, after the method of Ziel, showed several of Koch's bacilli. Although cases of isolated tuberculosis of the prostate have been related, it is usually part of a general tuberculosis of the genito-urinary group. We cannot affirm that tuberculosis, localized in one of the lateral lobes of the prostate, is dependent on the presence of bacilli in the seminal vesicles; but, it appears not unlikely that the infection of the prostate may be consecutive to their presence in the semen. In short, here is a complete sexual apparatus including the seminal vesicles, which presented no anatomical sign of tuberculosis and, in spite of that, the semen contained Koch's bacilli.

—*Revue Journale de Med., de Ch. et l'Obs.*

Throat Cough and its Treatment (*Fladinier*). The author calls attention to the frequency with which this complaint is overlooked. Cough is so commonly associated with bronchial trouble, that the liability is to forget that other parts of the respiratory system may be the seat of it, and so to overlook the real seat of the disease. Among the different affections of the throat is one which, by its great frequency and by the intensity of the cough, plays an important rôle in daily medical practice. It arises from a clinical condition which may be called catarrh of the throat. This condition may be established by either an acute attack of coryza, bronchitis, grippe, etc., or may be a sequel to these. It generally attacks the locality of the structures of the throat, implicating the nasal passages, the naso-pharynx, the pharynx and the larynx. Sometimes it is localized in the naso-pharynx, or in the larynx. The cough is due partly to the irritation produced by the thick mucus, and partly to laryngitis produced by the constant effort of coughing. In the absence of appropriate treatment, the affection may last for years. The treatment must be addressed to all the parts concerned, and consists principally of local applications of menthol. For the catarrhal rhinitis, boric and in fine powder may be snuffed up each nostril several times a day; twice a day a pledget of cotton, soaked in menthol dissolved in olive oil, is introduced into each nostril. The cotton must be introduced from before backward, on the floor of the nostril. Naso-pharyngeal catarrh may be treated with iodine and iodide potassium solution (Lugol's), combined with glycerine, applied on a piece of cotton attached to a bent probe, so that it may reach the vault of the pharynx. On this part the solution is simply dabbed, but on the posterior wall of the pharynx it may be used with greater severity. In a general way it is best to abstain from douches. For catarrhal laryngitis, the author recommends laryngeal applications, by means of a spray, directly on the vocal cords. The above mentholized oil, in strength of 50 per cent., is used. Of course, any complication, as polypus of the nose, hypertrophy of the turbinated bones, enlargement of the tonsils, must be attended to; but, even in these cases, the above indicated treatment often suffices to stop the distressing cough. The menthol injections are also serviceable in other affections in which there is troublesome cough, as acute laryngitis, clergyman's sore throat, tubercular laryngitis, etc.—*Gazette Medicale de Montreal.*

Spermatogenesis in Man and in Mammalia (*Nalleton*).—The author sums up as follows the principal, and in some ways dominant, facts of spermatogenesis:

1. Spermatogenesis is the result of multiple proliferations of the testicular cells, which change in form during these proliferations, and show successively the aspect of spermatogonia, spermatocytis, and spermatides.
2. The spermatogoids arise from simple transformation of the spermatides.
3. A maturation of the spermatogoids may be admitted just as is a maturation of the ovule. This maturation consists in a reduction of the chromatic (coloring) substance of the ovule, or spermatogoid. The maturation occurs at the moment when a spermatocyle is divided twice in succession, without an interval of rest, producing four spermatides.

Suppuration in Simple Fractures (*Gangolphe*). —This is one of the rarest complications. The exception, in fractures closed and dressed antiseptically, it can evidently only appear in special circumstances,

as advanced age, alcoholism, all debilitating causes, diabetes, etc., constituting a favorable soil for the production of infection.

The prime cause is due to the presence of a pyogenic microbe in the organism, which has gained admission in some way, most frequently by a superficial wound, more or less distant from the fracture. Tripier said: "That a fracture might be considered as complicated whenever the subject had an excoriation on the back." At other times the germs are introduced by means of the mouth, the normal seat of these parasites; in one case an otitis was thought to be the determining factor in the infection. This shows the necessity for prophylactic treatment.

Careful disinfection of excoriations, wounds of the mouth, otitis, etc., will most generally suffice to prevent suppuration in the subcutaneous lesion.

FRENCH NOTES.

A. E. Roussel, M.D.

A New Treatment of Exophthalmic Goitre.—Independently of the classified methods, digitalis, the bromides, continuous current, hydrotherapy, belladonna, veratrum viride, and, we will add, antipyrine (about 30 grains a day, associated with bromide of strontium 30 to 45 grains a day), Professor Dieulafoy has proposed the following treatment.

This treatment is based on the analogy which exists in a tuberculous case when suffering from hemoptysis or when threatened with the same. In these cases he administers ipecac, and under the influence of this medicament diminishes in force and frequency, the erethism ceases, and consecutively the hemoptysis is arrested or prevented.

Or, in a case of Basedow's disease the primary indication is also to contract the cardio-vascular excitement; for this purpose M. Dieulafoy treats this affection according to the above principle. He associates ipecac to the digitalis or opium, in pills composed as follows:

℞.—Powdered ipecac..... gr. ½.
Powdered digitalis leaves..... gr. ⅓.
Extract of opium..... gr. ¼.

For one pill. Four to six to be taken in the twenty-four hours.

He has treated by this method several patients suffering from exophthalmic goitre, and a considerable amelioration of all the symptoms has been the rule; this was especially rapid and striking in two cases; certainly no other treatment would have given similar results.

The effect of this medication is noticed in a general amelioration of the symptoms of the malady appreciable at the end of a few days; very marked after several months and equivalent to a cure. The only inconvenience of this treatment is in certain cases diarrhœa, which persists until tolerance is established.

—*La Médicine Modern.*

Medical News and Miscellany.

To Insure Keeley "Graduates."—The Pittsburg Bi-Chloride of Gold Club, composed of persons who have taken the Keeley treatment for drunkenness, have organized an insurance association, which will issue policies to "graduates" of the Keeley institutes. It is claimed that these persons are discriminated against by the old line companies, and that this discrimination is unjust.

How much of the stock has Keeley subscribed for?

Medical Temperance in Europe.—It is admitted by professional men that in the struggle to check inebriety, which has so largely occupied the most cultured intellects on the Continent of Europe, very little has been done in the advocacy of practical abstinence. The prevailing idea, it is alleged, even among members of the medical profession there, has been that the increase of insanity and of other evils from drinking has arisen from the heavier alcohols, and that pure, unsophisticated spirits, wines and beers are really temperance beverages. That a new departure is being taken in this respect by members of the medical profession is evident from the fact that such men as Professor Forel, of Zurich; Professor Bunge, of Tasle, and Dr. Wilhelm Bode, of Dresden, have established and are vigorously supporting total abstinence societies in those cities.

For the Sick Babies.—The Chicago *Daily News* Lincoln Park Sanitarium will soon open for the reception of its guests—the thousands of sick babies for whom it cares each summer as a hen cares for her chicks. The great building is still in the hands of the W. H. Stubbings Company, painters, and when it is opened for its kindly mission will be one of the handsomest attractions in Lincoln Park. In many ways the building has been improved, and the matron and medical staff will be prepared to care for at least 50,000 babies during the heated term. Last summer more than 36,000 babies and mothers enjoyed the hospitality and saving hand of this unique and peerless charity.

The "Country Week" department of the *Daily News* Fresh-Air Fund will soon be prepared to send guests to country homes. Many Charity Globes have been placed in friendly drug stores and other business places, and the generous public has started in early to help the poor little ones who cannot help themselves.

Dont's for Druggists.—Don't spit in the mortar to soften a pill mass.

Don't use alcohol to make a solution of borax.

Don't use asafœtida to perfume prepared chalk.

Don't bite the corks to make them fit the bottle.

Don't wipe the horn spoon on your shirt when a towel is not handy.

Don't test the quality of a tooth brush on your teeth in making a sale.

Don't insist that iodoform is a delicious odor if your customers don't like it.

Don't use *counterfeit* coin to make lunar caustic,—the acid knows the difference.

Don't try to make alcohol and oil of sweet almonds stay mixed—old Liebig couldn't do it.

Don't delay filling a telephone order for five postage stamps to be sent six blocks to a residence.

Don't forget to wrap your stocking around the clapper of the night bell if you want to enjoy the sweet repose of the just.

Don't show any displeasure when some all-night saloon-keeper rings you out of bed on a cold night to telephone for a keg of beer from a brewery.

Don't fail to scrupulously follow the order on a prescription—when the doctor orders five or six grains of dry powder in a pill and orders you to make the pills small—have a hydraulic press handy to compress them to one-third the size.

—H. Keehole, *Meyer Brothers' Druggist.*

WEEKLY Report of Interments in Philadelphia, from June 4 to June 11, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Alcoholism	1		Inflammation bronchi	3	9
Apoplexy	13		" kidneys	8	
Bright's disease	10		" larynx	1	
Burns and scalds		2	" liver	1	
Cancer	8	1	" lungs	11	13
Casualties	5	1	" heart	2	
Congestion of the brain		2	" peritoneum	6	2
" " lungs	2	1	" s. & bowels	2	6
Child birth	1		" spine	2	1
Cholera infantum		20	" pharynx		1
Cholera morbus	1		" tonsils		1
Cirrhosis of the liver	1		Indigestion		1
Colic		1	Marasmus		15
Consumption of the lungs	45	4	Measles		3
Convulsions		20	Necrosis of spine	1	
Croup		1	Neuralgia of the heart	1	
Cyanosis		1	Obstruction of the bowels	1	
Debility	3	1	Old age	12	
Diabetes	5		Paralysis		1
Diarrhœa	1		Poisoning	1	
Diphtheria		21	Scrofula		1
Disease of the brain	1		Septicæmia	1	
Disease of the heart	16	5	Softening of the brain	5	
Drowned		2	Strangulation		1
Dropsy		2	Suicide	4	1
Enlargement of the heart	1		Sunstroke	2	
Emphysema	1		Syphilis	1	
Fever, remittent	1		Teething		4
" scarlet	1	9	Tetanus		1
" typhoid	2	2	Tumor	6	
Gangrene	1		Uræmia	2	1
Homicide	2		Whooping cough		3
Inanition	1	8			
Influenza	3		Total	201	174
Inflammation brain	2	5			

ON THE ABSORPTION OF IODIDE OF POTASSIUM FROM THE RECTUM.—Baczkiewicz communicates the results of his experiments on the healthy and sick which he has made to study the absorption of iodide of potassium from the rectum. The iodide was introduced either in the shape of an aqueous solution (10 grammes to 50 cub. centimeters) or in the form of suppositories (containing the same amount of the salt). The appearance of iodine in the subject's saliva was detected by means of the usual starch test. The author found that:

1. In eight healthy persons iodine could be discovered in the saliva in from five to nine minutes, the average time being seven minutes.

2. In five patients with lesions about the rectum or in its neighborhood (cancer of the rectum, parametritis, hæmatocele retrouterina, etc.), the absorption was retarded, the time oscillating between nine and fifteen minutes.

3. The same was the case in seven patients with remote affections (acute nephritis, malignant disease of the stomach, cardiac organic disease, etc.), the time averaging about fourteen minutes.

4. In the shape of solutions the iodide was absorbed by the rectal mucous membrane more rapidly than in that of suppositories, the difference amounting to several minutes.—*Prov. Med. Gaz.*

THE educational exhibit from Colorado at the World's Fair is expected to be exceptionally good. That it may be intelligently prepared, Dr. Snyder, President of the State Normal School, who is an enthusiastic expert in exposition affairs, has been engaged, by the State Board, to visit teachers' institutes and the schools of the State, from kindergarten to college, and explain what is wanted and how it can best be prepared. He carries with him a mass of specimen work with which to illustrate his addresses. The result is that he leaves both teachers and scholars changed from a state of bewilderment into one of understanding and enthusiasm, and prepared to work effectively in gathering the exhibit desired.

THE Select Committee of the House of Commons on the Registration of Midwives have been very busy taking evidence during the past week, and have examined a considerable number of witnesses, mostly, it is unsatisfactory to state, in favor of the bill. Dr. Drage, of Hatfield, gave some important evidence, but the most convincing yet given against the bill was that given by Dr. Atthill, of Dublin, on the 27th ult. He spoke with great knowledge of the subject, and he evidently made an impression on the committee, and at the conclusion the chairman thanked him for his "very valuable evidence." He gave his views with great emphasis, and I was very pleased to observe that he would not allow the members of the committee to take him away to a side issue. He stuck to his text manfully against all cross-questioning, viz., that midwives should not be registered unless they are educated up to the standard of medical men. His evidence was the more valuable because he is now quite independent of midwifery practice, and only came forward to protest against registration from a sense of public duty. He is, moreover, one of the leading authorities on obstetrics in the United Kingdom. It was really very good of him to take advantage of his being in town to attend the meeting of the General Medical Council to give evidence on the subject. It is a great pity that our leading London obstetric physicians appear to favor the bill. If it were proposed to register men as midwives after a three months' course of lectures, they would be in attendance before the committee by the hundred to protest against such a proposal. But because the privileges of registration, most illogically, are to be confined to women they have not a word to say against it.—*Hosp. Gazette.*

THIRTY-FIVE of the forty nine States and Territories in the Union have accepted the building sites assigned them on the Exposition grounds, and have submitted to the construction bureau for approval the plans of the buildings they propose to erect. Nearly all the others, it is known, are about ready to take like action. Every State and Territory, with perhaps three exceptions, will erect a building. Quite a number of these buildings will be reproductions of historic structures such as Independence Hall, Washington's Mt. Vernon home, old Fort Marion, etc. They will occupy the northern portion of the Exposition grounds and will be surrounded by walks, lawns, shrubbery and flowers. They will be used as headquarters for State boards and visitors and as receptacles for exhibits showing State resources, etc.

MEDICAL CORPS, U. S. NAVY.

Changes in the Medical Corps of the U. S. Navy for the week ending June 11, 1892.

STITT, E. R., Assistant-Surgeon. Detached from Naval Hospital, Philadelphia, and to examination for promotion, and then to Bureau Medicine and Surgery.

BAILEY, T. B., Assistant-Surgeon. Detached from Receiving Ship "Minnesota," and to examination for promotion, and then to Hospital, Philadelphia, Pa.

BYRNES, J. C., Passed Assistant-Surgeon. Ordered to special duty at Norfolk and Portsmouth, Va.

WILSON, H. D., Assistant-Surgeon. Ordered to the Receiving Ship "Minnesota."

WILSON, G. B., Passed Assistant-Surgeon. Ordered to temporary duty at Naval Hospital, Chelsea, Mass.